

DOCUMENT RESUME

ED 164 748

CE 013 008

AUTHOR Kruppa, J. Russell; And Others
TITLE Preparing Teachers of Industrial Education for Disadvantaged and Handicapped Children at the Secondary Level. (A Model for Curriculum Development). Project Final Report.
INSTITUTION New Jersey State Dept. of Education, Trenton. Bureau of Special Needs and Cooperative Education.
PUB DATE Jan 73
NOTE 126p.; Not available in hard copy due to light print in the original document
EDRS PRICE MF-\$0.83 Plus Postage. HC Not Available from EDRS.
DESCRIPTORS *Curriculum Development; Disadvantaged Youth; Handicapped Students; *Industrial Education; Models; National Surveys; Performance Based Teacher Education; Preservice Education; Program Content; Program Design; Secondary Education; *Special Education; *Teacher Certification; *Teacher Education; *Teaching Skills
IDENTIFIERS Standards for State Approval of Teacher Education

ABSTRACT

This report describes a project the assignment of which was (1) to clarify the needs for baccalaureate programs through which industrial education teachers could be prepared to teach handicapped and disadvantaged children and (2) to develop a model from which appropriate curricula could be developed. In chapter 1 the project background is discussed and terms relevant to this area are described. In chapter 2 the need for preservice programs is explained. This section discusses the need for dual purpose curriculum based upon literature and special meetings and as reflected by a national survey. Chapter 3 contains the types and characteristics of secondary level programs. These include secondary level special needs programs and industrial education for special needs students. Chapter 4 discusses the need for a competency based curriculum model. Chapter 5 presents the curriculum model which is patterned around the Standards of the National Association of State Directors of Teacher Education and Certification. Also included are competency lists needed for general education, professional education, and major fields of specialization. Chapter 6 gives recommendations and suggestions for implementation of the curriculum model. Appendixes include the questionnaire used to gather information for this report and a statistical analysis; directions for developing learning experiences; and an annotated bibliography. (CT)

* Reproductions supplied by EDRS are the best that can be made *
* from the original document. *

PREPARING TEACHERS OF INDUSTRIAL
EDUCATION FOR DISADVANTAGED AND HANDICAPPED
CHILDREN AT THE SECONDARY LEVEL

(A Model for Curriculum Development)

Prepared by

J. Russell Kruppa, Project Director
Stephen Hritz and Robert Thrower,
Co-Directors and Curriculum Specialists

U.S. DEPARTMENT OF HEALTH,
EDUCATION & WELFARE
NATIONAL INSTITUTE OF
EDUCATION

THIS DOCUMENT HAS BEEN REPRODUCED EXACTLY AS RECEIVED FROM THE PERSON OR ORGANIZATION ORIGINATING IT. POINTS OF VIEW OR OPINIONS STATED DO NOT NECESSARILY REPRESENT OFFICIAL NATIONAL INSTITUTE OF EDUCATION POSITION OR POLICY.

Project Final Report

January 1973

"PERMISSION TO REPRODUCE THIS MATERIAL HAS BEEN GRANTED BY

Harold R. Seltzer

TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC) AND USERS OF THE ERIC SYSTEM."

This research was supported by a grant from
The Bureau of Special Needs and Cooperative Education

Stephen Poliacik
Assistant Commissioner of Education
Division of Vocational Education
Trenton, N.J.

* The document herein presented was developed through a grant from the Bureau of Special Needs and Cooperative Education of the Division of Vocational Education in the State of New Jersey. However, the material contained does not necessarily reflect the position or policies of the Bureau or Division and no official endorsement by either should be inferred.

PROJECT STAFF

Project Director.....Dr. J. Russell Kruppa, Chairman
Department of Industrial Arts
Trenton State College

Co-Director & Curriculum Specialist....Mr. Stephen Hritz, Chairman
Department of Special Education
Trenton State College

Co-Director & Curriculum Specialist....Dr. Robert Thrower, Director
Division of Industrial Education
and Technology
Trenton State College

Secretary.....Miss Betty Ann Ash
Trenton, New Jersey

Research Associate.....Miss Mary Lee Mosher, Graduate
Student
Trenton State College

Research Associate.....Miss Susan B. Rapp, Graduate
Student
Trenton State College

Industrial Education Consultants.....Dr. Norman Asper
Professor

Dr. William Alexander
Associate Professor

Mr. James Nichols
Assistant Professor

Dr. Gary Oakley
Assistant Professor

Dr. Stanford Ruggles
Associate Professor

Mr. David F. Smith
Associate Professor

Dr. Robert Weber
Assistant Professor

PROJECT STAFF (continued)

Special Education Consultants.....Mr. James Feehan
Assistant Professor

Dr. Diana McColl
Assistant Professor

Mrs. Helene McRae
Assistant Professor

Mrs. Ann Melby
Instructor

Dr. Howard Riley
Assistant Professor

FOREWORD

Faculty members in the Division of Industrial Education and Technology and the Department of Special Education at Trenton State College had for some time recognized the need for teachers at the secondary level who could work successfully with those disadvantaged and handicapped children enrolled in industrial and technically oriented programs. At times individuals had even talked about the possibility of somehow combining aspects of each baccalaureate so that interested students could graduate with the training necessary to fill those positions which often went begging for qualified personnel.

This project was funded by the Bureau of Special Needs and Cooperative Education through the Division of Vocational Education in the Department of Education at Trenton, New Jersey. The funding period ran from January 1972 through June 31, 1972 with an extension of time to January 1973 to complete the final report.

The project assignment was to clarify the need for baccalaureate programs through which industrial education teachers could be prepared to teach handicapped and disadvantaged children and to develop a model from which appropriate curricula could be developed.

The model which is proposed is patterned around the format of the Standards of the National Association of State Directors of Teacher Education and Certification and includes the three categories of: (1) general education, (2) professional education and (3) major areas of specialization including industrial arts, special education and vocational education. The major developmental thrust within the model is in professional education. This model is performance-based and consists of competencies expected of the beginning teacher along with suggested content outlines and strategies whereby each competency can be attained. The intent by the project staff was to propose a model comprehensive enough to permit graduates of programs evolving from it to be certified in both industrial education and special education. Local conditions will dictate direction and emphasis within these two broad fields of specialization.

For those interested in additional references relative to the proposed program an annotated Bibliography can be found in Appendix C.

ACKNOWLEDGEMENTS

This project would not have been possible without the dedication and cooperation of many people.

Much recognition must be given to Mr. John Wyllie, Director of the Bureau of Special Needs and Cooperative Education for his perception of the need for joint program development in the areas of Industrial Education and Special Education and for his support in funding the project.

Personnel in the New Jersey State Education Department were especially helpful in providing direction and supplying support materials and services. Much appreciation is expressed to: Paul Mozenter, Acting Director Vocational Services for the Disadvantaged; Dean Garwood, Director Vocational Education for the Handicapped; Mr. John Smith, former Director of Industrial Arts Education; Mr. Richard Callan, Director of Industrial Arts Education; and Patrick Doherty, Residential Manpower Center.

Teacher educators throughout the nation were most cooperative in responding to a questionnaire which made it possible to assess the status of and need for the development of programs as proposed in this report. In addition many provided valuable suggestions and materials which were helpful in the development of the project. Others shared valuable ideas with some of the project staff in a special meeting at the American Industrial Arts Association Convention in Dallas, Texas. To each of these colleagues we express our deep appreciation.

Much valuable information was gleaned from meetings with Child Study Supervisors, Industrial Arts and Special Education Teachers, Principals and Guidance Personnel throughout the State of New Jersey. Through these meetings we became more appreciative of the real needs at the grass roots level, became more familiar with the variety of programs in which prospective teachers would be employed, established contacts for field experience centers and obtained the necessary commitment to work cooperatively in the joint effort which is so essential in preparing prospective teachers. The ultimate success of any planned program rests with the cooperative efforts of these personnel and our greatest debt of appreciation is expressed to them.

Without the deep commitment to the project which was shared by other members of the project staff and faculty members from both the Division of Industrial Education and Technology and the Department of Special Education a project of this scope could not have been accom-

plished. For the many long hours in preparing and reviewing portions of the program and for meeting the many eleventh hour deadlines, our sincere thanks go to each of them.

The need for qualified industrial education teachers to work with handicapped and disadvantaged youth in a variety of programs at the secondary school level has been firmly established. For those teacher educators and institutions which have expressed a concern for preparing teachers to meet this need, we hope this report will provide direction for curriculum development.

J. Russell Kruppa
Stephen P. Hritz
Robert Thrower
January 1973

TABLE OF CONTENTS

FOREWORD.....	i
ACKNOWLEDGEMENTS.....	ii
LIST OF TABLES.....	vi
CHAPTER I OVERVIEW OF THE PROJECT.....	1
Background.....	1
Definition of Terms.....	3
CHAPTER II NEED FOR PRE-SERVICE PROGRAMS.....	5
Need for Dual Purpose Curriculum Based Upon Literature.....	5
Need for Dual Purpose Curriculum Based Upon Special	
Meetings.....	7
Need for Dual Purpose Program as Reflected by a National	
Survey.....	9
CHAPTER III TYPES OF SECONDARY LEVEL PROGRAMS AND THEIR	
CHARACTERISTICS.....	10
Characteristics of Secondary Level Special Needs Programs..	10
Industrial Education for Special Needs Students.....	11
Types of Programs for Special Needs Students.....	12
CHAPTER IV NEED FOR COMPETENCY BASED CURRICULUM MODEL.....	14
Need for List of Competencies.....	14
Rationale for NASDTEC Format in Classifying Competencies...	14
Sources of Competencies.....	15
Analysis and Classification of Competencies to fit	
NASDTEC Format.....	16
Developing Learning Experiences to Achieve Selected	
Competencies.....	18

TABLE OF CONTENTS (continued)

CHAPTER V	CURRICULUM MODEL.....	19
	General Education.....	19
	Professional Education.....	21
	Curriculum.....	21
	Methods of Teaching.....	35
	Educational Psychology.....	44
	Human and Intercultural Relations.....	45
	Foundations.....	51
	Student Personnel Services.....	60
	Field Experiences.....	68
	Student Teaching.....	68
	Major Fields of Specialization.....	74
	Industrial Arts.....	74
	Vocational Education.....	76
	Exceptional Children.....	77
CHAPTER VI	RECOMMENDATIONS AND SUGGESTIONS FOR IMPLEMENTATION.....	79
	SELECTED BIBLIOGRAPHY.....	82
	APPENDICES.....	88
	A. Questionnaire and Statistical Analysis.....	88
	B. Directions for Developing Learning Experiences.....	94
	C. Annotated Bibliography.....	103

LIST OF TABLES

Table

- 1 Strategies and Field Experience Components.....71

CHAPTER I

OVERVIEW OF THE PROJECT

Late in the fall of 1971 Mr. John Wyllie, Director of the Bureau of Special Needs and Cooperative Education approached Dr. Robert Thrower, Director of the Division of Industrial Education, about the Division's interest in developing a curriculum model with a concentration in both Industrial Education and Special Education. This curriculum model should be designed so that teachers could be prepared to work with handicapped and disadvantaged youngsters who are enrolled in Industrial Education courses at the secondary level. The Division's response was positive because this need was apparent and had been discussed with members of the special education faculty some time earlier. Through the Bureau of Special Needs and Cooperative Education, a small development grant was then awarded and made possible the curriculum model proposed in this document.

Background

Handicapped students are the students who have been unable to achieve successfully in regular school programs. These students have always existed and will continue to be present in the classroom. Formerly, they were isolated from their peers and were taught "watered-down" versions of existing courses. Many of them dropped out of school after they reached the age of sixteen. Today, however, there is a growing desire to recognize these students and their needs and to provide programs that will permit them to achieve to the maximum of their potential.

Educators in the field of industrial education have often had some students with special needs in their classroom, although they may not have been so designated. Generally, these students were the ones who could not seem to achieve successfully in academic courses and one alternative was often the industrial education laboratory. It was felt that the emphasis on manipulative skills and pre-vocational and/or vocational learning was more appropriate. Also, industrial education courses offered greater opportunity for informality, direct application of learning, therapeutic release, and the possibility of a one-to-one student-teacher relationship, all of which seem helpful when working with special needs students.

Specially designed programs for serving these students at the secondary levels have been almost non-existent in the past because most teachers in special education have been prepared to work at the primary levels. Most of the limited number of teachers presently

working with handicapped students at the secondary levels have either been trained for the primary levels or have been subject matter specialists who have taken limited course work in the special education area. The adequacy of this procedure for preparing the special teacher can be questioned. Sparks and Younie (1969) suggested that the teachers' lack of preparation at the secondary levels may be a reason that their students are not demonstrating "superior academic gains as a function of special class placement." (p. 16). They further suggested that special education teachers should be trained both as subject matter and disabilities specialists.

In the past, industrial education teachers and special education teachers have gone their separate ways with little or no coordination of their efforts in order to provide adequately for the needs of handicapped and disadvantaged children. Some special education teachers attempted to provide students with pre-vocational training, but their limited background and lack of skills did not permit them to do an adequate job. Industrial education teachers with special needs students in their classes likewise did not do an adequate job since they lacked training to permit them to understand the students' capabilities and limitations. Consequently, the educational program resulting from either of these efforts likely would not permit the student to function to the best of his ability and become an effective member of society.

Federal funding through the Vocational Education Act of 1963 and the 1968 Amendments has provided part of the impetus to think about these students and their needs. This legislation stipulated that a certain percentage of the federal monies allocated for vocational programs be spent for the development and implementation of programs for handicapped students. In New Jersey, this financial aid has helped in the development and expansion of programs such as the Employment Orientation Program, the Work Experience and Career Exploration Program, work-study programs, sheltered workshops and special programs in vocational and residential schools. The creation and expansion of these programs has and will continue to require additional qualified teachers.

Since no undergraduate programs in special education-industrial education exist in New Jersey, teachers in special education or industrial education have either learned through experience or have had to take graduate level or post-degree courses to prepare for teaching the handicapped and disadvantaged. Colleges and universities with teacher education program, have not provided for the preparation of teachers with knowledge in both of these areas of concern. Only a few schools in the nation have developed or are in the process of developing specialized undergraduate programs in this area.

The development of a curriculum including both industrial education and special education could be accomplished in several ways. Existing programs could serve as the base for this curriculum; however, a national survey by Kruppa (1972) showed that there was a lack of these programs. Another method could combine the best of the special education curriculum and the best of the industrial education curriculum at an institution to develop the new program. A third method could base the undergraduate curriculum upon those competencies required for beginning teachers of industrial education for special needs students. Since the development of any viable curriculum is dependent upon consideration of the competencies which the prospective teacher must possess, an attempt was made to arrive at those competencies which appeared necessary for a teacher of handicapped and disadvantaged youth in secondary school programs in industrial education.

The apparent need as projected by the Bureau of Special Needs and Cooperative Education was further strengthened through a review of literature, visitations to a number of secondary programs within the State of New Jersey, a series of meetings held with personnel in the field, information obtained from a national survey of teacher training institutions in Industrial Education, and communication with the Bureau of Handicapped, United States Office of Education. Mandatory legislation for special education plus an increased awareness by educators of the need for purposeful programs will demand that these needs be met. With this background comes the realization that teacher education institutions must provide qualified teachers to do the job at the secondary level.

Definition of Terms

The following terms are defined to provide clarity in this report.

Handicapped and Disadvantaged Children: Children who deviate intellectually, physically, socially, or emotionally so markedly from what is considered to be normal growth and development that they require a modification of school practices or special educational services in order for them to develop to their maximum capacity.

Special Needs Children: Special needs children are considered synonymous with handicapped and disadvantaged children.

Special Education: That branch of education which through special methods and practices serves children classified as "handicapped," "exceptional," or "disadvantaged."

Industrial Education: Is a generic term including the areas of industrial arts, vocational-industrial and technical education.

The significance of this project is in the ultimate use which educators will make of the proposed curriculum model which is designed for wide scale adaptation in providing one solution to a current problem in education.

CHAPTER II

NEED FOR PRE-SERVICE PROGRAMS

Even though the project staff was convinced that a need did exist for pre-service programs which would provide certification in both industrial education and special education, it seemed appropriate to assess the needs on a broader scale. Information for this portion of the research was obtained through a review of the literature, through a series of meetings with concerned individuals and through the evaluation of a national survey which was conducted to determine the existence of programs in industrial education teacher training institutions.

Need for Dual Purpose Curriculum Based Upon Literature

Throughout the literature, constant mention was made of the need for special education personnel and the inadequacy of the present programs for meeting the needs of handicapped children. It was stated in 1967, in an article entitled "Education of the Handicapped" that "fewer than one half of the Nation's five million handicapped are getting the special educational attention they need in order to become contributing members of adult society." (p.30). Martin (1970) suggested that approximately sixty percent of the handicapped in the nation were not receiving appropriate services. In a survey of private agencies serving the needs of the handicapped in New Jersey, Ellis and others (1968) found that one quarter of these institutions indicated that the public school programs were not meeting the needs of handicapped students. The lack of trained personnel was the main reason cited for the inadequacy of these school programs. Smith (1971) noted that:

to maintain adequate special education classes for the Nation's seven million children with identified handicaps would require 500,000 teachers with special education certification; we have only 175,000 with little likelihood that the shortage will be met in the future (p.30).

Jones (1971) in noting the trend toward placing special needs students in regular classrooms, made the suggestion that all teachers be given more training in special education in order that they might better understand these students.

The need for trained personnel increased sharply with the mandating of educational programs for special needs students. In 1968, New Jersey passed Title 18A, Chapter 46, New Jersey Statutes which declared that all handicapped children between the ages of five and twenty be identified and classified by local school districts and be provided with appropriate educational programs. Further legislation in June 1970, defined the terms to be used in classification and identification, stipulated the procedures to be followed, named the types of programs permissible for placement and stated other details for the implementation of Title 18A, Chapter 46 (Rules and Regulations Pursuant. . . . 1970). More evidence of the concern for the education of special needs students was shown by the ruling that provisions be made for free public education for retarded children in Pennsylvania in 1972, as reported in the Philadelphia Inquirer (May 6). As more children continue to be identified as having special needs, and as laws require the provision of an education commensurate with the students' needs and abilities, the demand for personnel trained in special education will continue to rise.

Not only is it important to prepare more special education personnel, but their training should include a background in industrial or occupational education. Younie (1966) stated that teachers of the mentally retarded should know about the world of work and the retardates' place in that world in order to build a continuous and meaningful program for these students. Sheperd (1966) also called for the training of special education teachers in occupations so that they might be better able to provide socio-occupational experiences for secondary level mental retardates. In 1967, Schwartz proposed that a special education curriculum include a four semester hour interdepartmental course in Special Education, Industrial Education and Technology. The purpose of this course was to study the world of work; and provide experiences in handling tools, materials and processes; and learn about various occupational families. Bartsch (1971) noted, in his concluding statements, that industrial education training taught by special education teachers was insufficient, probably due to a lack of training. The importance of training special education teachers to know about the world of work comes from the realization that one of the needs of handicapped students is that of becoming partially or totally self-supporting. Formerly special needs students could find jobs in the unskilled area, but the number of these positions is decreasing. Many special education programs presently in existence should be re-examined in the light of the Bureau of Labor Statistics' prediction that by 1975, only one in five occupations will be unskilled (Goldstein, 1971). Haug and Rifkin (1970) indicated that a background in industrial education would permit special education teachers

to train the majority of handicapped students to become useful workers. Kokaska (1971) also indicated that the retarded were capable of succeeding in craft occupations as well as in unskilled jobs.

A need has likewise been expressed on the part of industrial education teachers for training in special education. In the final report of the Seminar for Supervisors and Teacher Educators of Persons with Special Needs, Arnold (1968) stated that "vocational education has more to offer persons with special needs than any other area of study" and that vocational educators need special preparation to meet the needs of these students (p. 1). Mauchline (1968) noted that the field is wide open for industrial arts graduates "who are interested in rehabilitation and who are willing to make an aggressive and positive presentation of their abilities to sheltered workshop administrators" (pp. 136-137). Tisdall in 1964 spoke of the frequent relegation of mentally retarded students in shop courses and suggested a cooperative program between industrial education and special education departments be established. Brennan (1968) suggested that industrial education teachers prepare for the inclusion of slow learners in their laboratories. Freels (1967) recommended that undergraduate level training be given in special education for industrial arts teachers dealing with educable mentally handicapped students. He also noted that at the time there was a lack of proper facilities and opportunities for this kind of training.

The expansion of the number of programs in industrial education for special needs students is receiving impetus from the Vocational Education Act of 1963 and the 1968 Amendments. The increased number of programs will necessarily require more personnel who are qualified to function in these programs. Mozenter (1972) predicted an annual six percent increase in Employment Orientation Programs through the 1977-78 school year in New Jersey. In 1972-73 there were 188 programs, with an estimated 12,800 enrollment. The expansion in this area alone will demand a large number of personnel who presently are not available. The Governor's Advisory Committee for the New Jersey Comprehensive Statewide Planning Project for Vocational Rehabilitation Services (Ellis, 1968) advocated the expansion of work-study programs and predicted the need for a minimum of ten additional sheltered workshops between 1970 and 1975. Additional positions open to people trained in special education-industrial education would result if these recommendations are heeded. The committee also noted the shortage of vocational education training programs for special needs students and recommended expansion in these areas.

Need for Dual Purpose Curriculum Based Upon Special Meetings

During the spring of 1972, meetings with people involved in industrial education and special education were held at various locations in

the State of New Jersey. The purpose of these meetings was to determine if people in the field perceived a need for establishing dual purpose programs in industrial education and special education whereby future teachers would receive training. These meetings brought to light a number of programs in existence, with others projected for the future, which will require the services or personnel trained in both fields. At every meeting the participants stated that such a curriculum was long overdue and was critically needed.

Participants in a meeting held on January 18, 1972, at Trenton State College included Child Study Supervisors from a number of counties in New Jersey along with a principal, an industrial arts teacher, the State Director and a State Supervisor of Industrial Arts, the Acting State Director of Vocational Services for the Disadvantaged, and teacher educators. At this meeting the participants were informed of a proposed curriculum model and were asked to make suggestions and provide information that might prove valuable in developing such a program. Participants pointed out the existence of the Work Experience Programs, and the Employment Orientation Programs within the state. They also noted that programs in industrial education for special needs students were available in vocational-technical schools, industrial arts special programs, and in sheltered workshops. The general agreement among the participants was that personnel in these programs should have training in both industrial education and special education.

On February 18, 1972, a meeting was held in South Jersey at Mays Landing. The Child Study Supervisor of Atlantic County, Mr. Baruffi, expressed the concern over the possibility that the existence of such a program, although critically needed, might be used as an excuse by some teachers without this training to avoid working with special needs students. Industrial education teachers at Oakcrest High School indicated personal concern about their qualifications to work with special needs students and about the liability aspects involved. Repeatedly, they stated that they felt inadequately prepared to help students who were often present in their classrooms and recommended strongly that undergraduate dual purpose programs be established.

At a meeting in North Jersey on March 3, 1972, with Mr. Boris Schwartz (Director of Special Education Services, West Essex Area Schools in Caldwell, New Jersey), he indicated that the needs of only three percent of the special needs children in the Caldwell area were being met and that approximately thirty percent of the student body required some special help. If the needs of the students were to be met, a large number of personnel trained in special education must be employed. Mr. Schwartz indicated the critical need for people trained in special education-industrial education to meet the demand in his geographical area and in the remainder of the state.

Need for Dual Purpose Program as Reflected by a National Survey

Kruppa (1972) surveyed 160 colleges and universities in the United States which offered industrial education to determine the number and nature of programs being offered for the preparation of teachers of industrial education for handicapped and disadvantaged students. One hundred and twenty-eight of the questionnaires were returned for an eighty percent response. According to the survey, 110 colleges and universities did not offer programs of this nature. Eleven institutions indicated that such programs were offered even though many were of limited scope. Seven other institutions indicated that although no formal program was offered for industrial education-special education, advisement permitted students to take a limited amount of course work in special education. The eleven which offered structured programs indicated that they were offered at the undergraduate level. Five of the eleven indicated that the program was also available at the graduate level. The total number of credit hours required for graduation varied from 120 to 142 semester hours and from 60 to 210 quarter hours. In these programs, 25 to 50 semester hours and 45 to 72 quarter hours were required in technical areas, while 3 to 26 semester hours and 10 to 36 quarter hours were required for special education courses for preparation in working with handicapped and disadvantaged students. See Appendix A for the questionnaire and the statistical analysis.

Evidence from the literature, a series of special meetings and interviews, and results from a national survey of industrial education teacher training institutions clearly indicates that a critical need does exist for pre-service program through which personnel can be trained to fill existing positions and others which must be created at the secondary school level.

CHAPTER III

TYPES OF SECONDARY LEVEL PROGRAMS

AND THEIR CHARACTERISTICS

Those who consider adopting the proposed model for developing a dual certification curriculum may find information in this section helpful. Topics on characteristics of special programs, industrial education for special needs students and types of programs available are included.

Characteristics of Secondary Level Special Needs Programs

When considering a baccalaureate curriculum for preparing teachers, it is necessary to determine some of the characteristics of good secondary school programs in which they will teach.

Characteristic of a program for emotionally handicapped children may be derived from the teachers' competencies stated by Hewitt (1966). Such a program would be structured so that the students have a maximum of opportunities for reality-testing. It should provide for multi-sensory stimulation and selected individualized experiences which aid in the development of sensory and motor abilities. The program should present students with materials which are readily adaptable to their needs and interests and incorporate the use of immediate feedback on student performance.

Sharkey and Porter (1964) in their article on "Industrial Arts for the Mental Retardate," provide a generalized picture of educational programs for this child. According to their description, an appropriate curriculum would be one in which the basic goals of self-realization, human relationships, economic efficiency, and civic responsibility are met.

Ressler (1971) listed the following seven characteristics of disadvantaged students which must be considered in developing programs to meet their needs: "1. poor reading ability, 2. grade retardation, 3. introversion or withdrawal, 4. hostility, 5. proneness to delinquency, 6. social retardation, and 7. physical deprivation." (p.24) This list would suggest a curriculum which would provide students with activities which are not highly verbal in nature. These activities would be such that the students see the immediate, concrete application of learnings and the possibility of applying the learnings to satisfy their needs. The curriculum would provide opportunities for socialization and the expression of hostility in socially acceptable ways.

Sparks and Younie (1969) suggested that a curriculum for the mentally retarded student should have an orderly progression from kindergarten to the twelfth grade. Such a program would place shifting emphasis on academic, social and vocational skills according to the child's readiness.

Industrial Education for Special Needs Students

There seemed to be agreement that industrial education courses are valuable for students with special needs. There was, however, a tendency to subdivide the classification of "special needs students" and "industrial education" into their component parts and to treat these parts separately. For example, Buffer (1971), Nelson (1964), Sharkey and Porter (1964) and Rayburn (1970) were concerned with industrial arts for the educable mentally retarded. Hegen (1970) and Kagy (1969) discussed industrial arts and the culturally disadvantaged. Siegel and Haug (1970) focused on industrial arts for the physically handicapped. Others like Arnold (1968) and Ross (1971) emphasized vocational education for the special needs student while Schmitt and Woodin (1970) promoted vocational education for the culturally disadvantaged. Even though this subdivision existed, these authors were all concerned with the appropriateness of using industrial education courses to meet the needs of students who might not succeed in regular programs.

How then, does industrial education meet the general needs of handicapped and disadvantaged students? Sharkey and Porter (1964) viewed industrial arts as providing the mental retardate student with opportunities for self-expression, self-competition, and pre-vocational experiences. In the informal atmosphere of the industrial arts classroom, the student receives individualized instruction with opportunities for multi-sensory experiences, therapeutic release, meaningful routine, manual concentration and easily achieved successes (Ressler, 1971). Nelson (1964), Viggiani (1965) and Wilson (1970) suggested that industrial arts can be valuable as a core program to bring together the academic areas in a meaningful way. Haug and Rifkin (1970) acknowledged that many handicapped students can be trained to become useful workers, and Kokaska (1971) stated that the retarded are capable of succeeding in craft occupations as well as in unskilled jobs. This job training for the special needs students should be provided through vocational-oriented programs. Ross (1971) suggested that these programs must be student-oriented with small units of instruction, individual curricula and emphasis on behavioral objectives and success.

Types of Programs for Special Needs Students

Within the State of New Jersey the types of educational opportunities for special needs students were named in Rules and Regulations Pursuant to Title 18A, Chapter 46 New Jersey Statutes, (June 24, 1970) Title 8, Chapter 26 New Jersey Administrative Code. Students may attend special classes or programs in regular public schools or may attend special classes or programs operated by a county vocational school in the district. The students may also be enrolled in a State of New Jersey operated program or in sheltered workshops approved by the New Jersey Rehabilitation Commission and the Bureau of Special Education and Pupil Personnel Services. The students may also attend private schools when the district is not able to provide the services required. If students are not able to participate in any of these programs, they may receive individual instruction at home or at school.

At a January 18, 1972 meeting at Trenton State College, it was stated that industrial education classes for special needs students at the secondary level in regular public schools are generally modified programs. These classes offer students opportunities to receive some pre-vocational training and to develop some manual skills.

In a pamphlet entitled "Sequence of Vocational and Occupational Training Programs for Handicapped Students," Wyllie (no date) described programs available to special needs students in both regular public schools and vocational schools in New Jersey. The Introduction to Vocations programs are designed to help students become more aware of occupations and to provide them with a basic foundation for later career and education choices. Students in these programs have opportunities to briefly experience activities in home economics, health, industrial arts, business education and science. They also experience a unit of study called "Know Yourself." Employment Orientation Programs present students with simulated work tasks to help them in developing good work habits and attitudes. Students in these programs are also given some basic skill training in occupational areas that they have expressed an interest in or show ability in. Part-Time Cooperative Employment Orientation Programs provide special needs students with the opportunity to participate in part-time on-the-job work activities. During this experience, students are instructed, observed and evaluated on their progress.

It was stated in a meeting at Mays Landing on February 18, 1972, that students who are able to succeed in a vocational school program have the opportunity to participate in a variety of fields of specialization. A remedial program in reading and mathematics is generally available for students who require help in these subjects.

A pamphlet entitled "Work Experience and Career Exploration Program" (no date) described this option available for special needs students in the State of New Jersey. These programs are sponsored by the Bureau of Labor Standards in cooperation with the New Jersey State Department of Education. They provide school supervised work experience-career experience activities for selected youth fourteen or fifteen years old who are considered potential dropouts. This type of program differs from the Employment Orientation Program in that the Employment Orientation students must be at least sixteen years of age.

Ellis (1968) discussed the Sheltered Workshops in the State of New Jersey. These workshops provide the handicapped youth and adults with employment when they cannot qualify for work on the open job market because their disabilities prevent them from meeting the competitive requirements. When possible, Sheltered Workshops train the handicapped to work in the regular labor force. Presently, there are twenty-five Sheltered Workshops in New Jersey. All except those operated by the Commission for the Blind are privately owned.

A meeting at the Marie H. Katzenbach School for the Deaf on February 17, 1972 and the subsequent tour of the facilities showed the vocational and pre-vocational programs available in this state school. At the Katzenbach School vocational training in business, graphic arts, woodworking, metalworking, automobile repairwork, upholstery, and other areas is available to students in addition to academic course work.

CHAPTER IV

NEED FOR COMPETENCY BASED CURRICULUM MODEL

Need for List of Competencies

A current trend in teacher education is toward performance-based certification of teachers. Daniel (1971) suggested this trend appears, in fact, to be a response to the demand for teacher accountability as well as a desire to strengthen the profession. With this form of certification it becomes very important that the capabilities and desired performance of future teachers be more clearly delineated.

Johnson (1968) described a number of deficiencies in teacher education curricula: one was that pre-service teachers did not know what competencies they would be expected to exhibit at the time they finished their program. Smith (1969) stated that he felt a need for the identification of the skills and competencies required for special education teachers and suggested that these be used to test pre-service or in-service teachers. Cotrell and others (1970) indicated the need for the classification and analyzation of competencies for vocational and technical educators and determined those competencies which seemed valuable and necessary. The Performance Evaluation Project in New Jersey (1971) at the time of this research was in the process of determining competencies required for sixteen teaching fields. The argument for analyzation and interpretation of competencies has, in each case, been that this system would help in determining which competencies should receive important consideration in teacher training programs and curriculum development. In 1971, the National Association of State Directors of Teacher Education and Certification stated that:

each teaching major or field of specialization should be built on a clearly formulated statement of the competencies needed by teachers in this area of the public school curriculum. These competencies should include the attitudes, knowledges, understandings, and skills that are required, and the degree of expertise needed for a beginning teacher (p. 25).

Rationale for NASDTEC Format in Classifying Competencies

Lists of appropriate competencies were obtained through the review of literature, from colleagues in the profession and as a result of the survey conducted by Kruppa (1972). Even though most competencies were considered useful for a performance-based curriculum model it was difficult to utilize them in their original forms since there was no

standardized classification system. In evaluating the proliferation of categories under which existing competencies were listed it was apparent that a standardized format must be established. After considering several classification systems, the project staff choose the format used by the National Association of State Directors of Teacher Education and Certification in their publication Standards for State Approval of Teacher Education and the New Jersey Supplement to these Standards. Since the competencies which were selected for use in the proposed model were adaptable to the NASDTEC classification system and because this organization is probably the most universally accepted for evaluation of teacher training programs it appeared to be the one best choice.

Sources of Competencies

Lists of competencies were obtained from a variety of sources. Only a brief description about each source will be included in this section.

Cotrell and others (1970) generated a list of 390 competencies for vocational-technical education teachers. These were arrived at by conducting a career analysis of vocational-technical teaching. Following are the ten main categories which were presented: 1. program development, planning and evaluation, 2. instruction-planning, 3. instruction-execution, 4. instruction-evaluation, 5. management, 6. guidance, 7. school-community relations, 8. student vocational organization, 9. professional role and development and 10. coordination. Within each of these categories were listed the specific competencies deemed necessary for vocational-technical teachers.

Competencies for teachers of emotionally handicapped children were developed by Hewitt in 1966. They provide a structure which, with additions may be suitable for special education teachers in general. He divided his broadly stated competencies under the following seven main headings: objectivity, flexibility, structure, resourcefulness, social reinforcement, curriculum expertise and intellectual model and then described these headings further.

Dinger (1971) discussed the matter of competencies for teachers of secondary level educable mentally retarded students. The forty-one competencies which he listed go beyond those of Hewitt in that they suggest that the teacher have a pre-vocational background. These competencies were also much more detailed than those proposed by Hewitt.

Scott (1967) suggested the following five broadly stated competencies for teachers of culturally disadvantaged students:

1. proficiency "in dealing with rapidly changing situations that

arise in his classroom," 2. perceptiveness and capability "in meeting psychological needs of his pupils," 3. skill "in modifying learning experiences in the content areas," 4. responsiveness "to situations that arise in the classroom to help his pupils to acquire and practice social skills," and 5. flexibility "in decision-making" (pp. 132-134).

Melby and Regal (1972) at Trenton State College compiled and evaluated a list of sixty-seven competencies in special education. The following are the categories under which these competencies were originally classified: 1. teacher affect, 2. teacher effect, 3. teacher characteristics, 4. teacher interaction with other school personnel and 5. teacher relationship with parents and community.

Kemp (1966) offered the following competencies which should be considered for vocational teachers to successfully teach students with special needs: 1. subject-matter competence, 2. interest in working with these students, 3. the ability to reinforce slow-learners and respond to all students, 4. the ability to seek out new techniques for communicating with the students, 5. skill in presenting goals to students and aiding them to meet challenges, 6. the ability to measure students by individual achievements, 7. specialized training to work with the disadvantaged learner, 8. the ability to work with other school personnel, 9. the ability to gear instructional materials to the understanding of the students and 10. skill in helping students build better self-concepts.

Through a federal grant, a comprehensive study was undertaken and a listing of 136 competencies was compiled by Brolin and Thomas (1971). These competencies were prepared for teachers of secondary level educable mentally retarded children and not specifically for industrial education-special education, but they appear readily adaptable. The three broad headings originally used in this study for categorizing the competencies were Classroom Abilities, Background and Training and Personal Traits.

After carefully evaluating all available competencies a comprehensive preliminary list was developed which included 562 competencies. These were derived essentially from the works of Cotrell and Others (1970), Melby and Regal (1972) and Brolin and Thomas (1971).

Analysis and Classification of Competencies to fit NASDTEC Format

Since the preliminary list of 562 competencies was obtained from three major but different sources, the content was often repetitious and the style inconsistent. There was however some similarity in the

classifications of these competencies into various categories. Therefore, a jury of experts consisting of faculty members and graduate assistants from both the Division of Industrial Education and Technology and the Department of Special Education were charged with the responsibility of individually evaluating and classifying each competency under one of the following eight categories: (1) program development, (2) instruction, (3) knowledge of the learner, (4) community resources, (5) professional role and development, (6) management, (7) personality development, and (8) guidance.

Working from the individual tally sheets, a master tally of all responses was made. This master tally indicated some disagreement among jury members on the classification of certain competencies. Through a series of meetings, the jury eliminated certain inappropriate competencies and ultimately agreed upon the classification of all competencies to be used.

With all competencies categorized the final step in this preliminary screening process was to eliminate all duplication of ideas, rewrite others in more appropriate forms and edit to provide consistency in style. This phase was accomplished through three teams, each consisting of one special education and one industrial education faculty member. The final list of 330 competencies which was agreed upon by these evaluation and editing teams was now ready for adoption to the NASDTEC Standards format.

In order to establish a performance based curriculum model which might be flexible and adaptable by many teacher training institutions, those competencies deemed essential for the beginning teacher of industrial education who will work with handicapped and disadvantaged youth must be applied to a universally acceptable set of standards. The Standards for State Approval of Teacher Education, 1971 of the National Association of State Directors of Teacher Education and Certification divide the baccalaureate curriculum into three major categories: (1) General Education, (2) Professional Education, and (3) Major Fields of Specialization. The proposed curriculum model presented in Chapter V of this report will deal with each of these three areas in more detail.

Each of the 330 competencies previously developed fit in the NASDTEC category of Professional Education. For greater clarification of the content within the Professional Education category of the NASDTEC Standards, the New Jersey Supplement delineates eight sub-categories which were paired into the following four groups: (1) Curriculum and Methods of Teaching, (2) Educational Psychology and Human and Intercultural Relations, (3) Foundations of Education and Student Personnel Services and (4) Field Experiences

and Student Teaching. The project staff evaluated each of the 330 competencies and classified them appropriately under these eight sub-categories. Some competencies were suited to more than one sub-category and were so listed.

Developing Learning Experiences to Achieve Selected Competencies

The last major step in developing the performance-based curriculum model was to generate suggested learning experiences through which each competency could be attained by the prospective teacher. Four teams of qualified personnel were engaged to develop this last phase of the model. Again each team consisted of one faculty member from Industrial Education and one from Special Education. Each team was assigned to one of the four groups described above and was charged with the development of learning experiences for their assigned group of two sub-categories. Each team was supplied with detailed directions for fulfilling their assignment. The detailed directions for each team can be found in Appendix B of this report. Briefly their charge was to: (1) standardize the format and style for each competency in its final written form, (2) eliminate repetitious content in competencies and rewrite or create appropriate new statements but to retain content as suggested in all assigned competencies, (3) cluster competencies within appropriate content areas under each of the two sub-categories, (4) list in topical outline form, to the first order, the suggested content to achieve the competencies as clustered in (3) above and (5) to describe suggested strategies for implementing the content in (4) above.

While these four teams were engaged in developing learning experiences, the project staff generated competencies and suggested strategies by which these competencies could be attained for the other two major categories outlined by the NASDTEC Standards. These included the categories of General Education and Major Fields of Specialization. The project staff was guided by excerpts from the NASDTEC Standards and New Jersey Supplement, as included in materials in Appendix B of this report, when developing details for these two categories.

The next chapter of this report will include the culmination of efforts by the project staff and consultants as it presents the curriculum model and suggestions for its utilization in curriculum development.

CHAPTER V

CURRICULUM MODEL

As stated previously the central purpose of this project was to develop a curriculum model designed to prepare teachers of industrial education with the special expertise to teach handicapped and disadvantaged children. Implementation of this curriculum model at the baccalaureate level could result in certification in both the fields of Industrial Education and Special Education.

This curriculum model is competency based and in no way attempted to describe a curriculum in terms of specific courses. The intention was to provide the ingredients which each institution could package to best fit their particular needs. To best facilitate this flexibility the Standard for State Approval of Teacher Education of the National Association of State Directors of Teacher Education and Certification was chosen as the basic structure around which to build the curriculum model. This Standard, consisting of the three major categories of General Education, Professional Education, and Major Fields of Specialization, was chosen because of its wide spread acceptance. Each of these three categories was treated separately and are described in the following sections.

General Education

This category of the curriculum encompasses that portion of the baccalaureate program which provides a spread of educational opportunities commonly known as general education. The Standards specify that this category must include studies in at least four of the following areas: humanities, mathematics, biological and physical sciences, and the social and behavioral sciences. The achievement of the competencies listed below should satisfy the requirements of this major category.

COMPETENCIES:

1. The prospective teacher will be able to communicate clearly and effectively through the written word and orally.
2. The prospective teacher will possess a knowledge of the history and culture of his country and state as it relates to the social, political, economic, and industrial aspects.
3. The prospective teacher will possess a basic understanding of the mental, emotional, social, and physical development from childhood through adolescence for both normal and abnormal youth.

4. The prospective teacher will understand the principals of the biological and physical sciences as they relate to man and his environment.
5. The prospective teacher will demonstrate the ability to utilize mathematical concepts as they relate to problems in industrial education and business and social problems.
6. The prospective teacher will be knowledgeable about contemporary health problems and demonstrate the ability to promote safe practices and apply first aid within the school environment.
7. The prospective teacher will possess an understanding of principles of good design and their application to the construction and manufacture of industrial products and the utilization of graphic arts equipment and materials as they relate to communications media.
8. The prospective teacher will possess an understanding of the general development of civilization and many of humanity's fundamental questions through the study of the classics in religion, philosophy and literature.

Each of these broadly stated competencies can be attained through a selection of courses within the broad areas shown below.

1. Humanities
 - a. Written Communication Skills
 - b. Verbal Communication Skills
 - c. Design and Graphics
 - d. Creative and Expressive Arts
 - e. Religion and Philosophy
 - f. Modern Languages
 - g. Literature
2. Mathematics
 - a. Mathematical Analysis
 - b. Business Mathematics
3. Biological and Physical Sciences
 - a. Biology
 - b. Anatomy
 - c. Physiology
 - d. Modern Day Health Problems
 - e. Safety
 - f. First Aid
4. Social and Behavioral Sciences
 - a. Sociology
 - b. History
 - c. Political Science

- d. Economics
- e. General Psychology
- f. Adolescent Psychology
- g. Child Psychology
- h. Abnormal Psychology

Professional Education

This category encompasses the many professional competencies needed by the prospective teacher. The New Jersey Supplement to the Standards specifies that the sub-categories of methods of teaching, educational psychology, field experiences, human and intercultural relations, curriculum, foundations of education, student personnel services and student teaching be included in the curriculum. Each of the sub-categories with the exception of field experiences and student teaching is divided into major content areas with appropriate competencies and suggested topical outline and strategies for attainment of these competencies. The sub-categories of field experiences and student teaching are primarily strategies for reinforcing, solidifying, and demonstrating attainment of the competencies specified in all categories of the curriculum. The detailed content of the eight sub-categories follow:

I. CURRICULUM

A. Needs Assessment

1. Competencies:

Upon completing the proposed curriculum, the prospective teacher will be able to:

- a. Obtain administrative approval for conducting an industrial education survey.
- b. Consult the Chamber of Commerce to identify area employers to be contacted in an industrial education survey.
- c. Establish communication with employer representatives who will be involved in an industrial education survey.
- d. Persuade labor representatives to participate in an industrial education survey.
- e. Solicit assistance of the industrial education personnel from the state department and/or university in conducting an industrial education survey.
- f. Identify the geographical area in which an industrial education survey will be conducted.
- g. Organize a steering committee to assist in the pre-planning activities for an industrial education survey.

- h. Devise a plan of activities for the survey staff to follow in conducting an industrial education survey.
 - i. Collect student occupational interest data to identify vocational needs.
 - j. Analyze occupations with assistance of employers and labor representatives.
 - k. Conduct opinion surveys in the school and community concerning the industrial education programs.
 - l. Determine the availability of occupational opportunities in and around the community.
 - m. Obtain information on occupational opportunities.
 - n. Acquire information from members of the community power structure (e.g., political, social, economic pressure groups) regarding their expectations of the industrial education program.
 - o. Adapt an existing industrial education survey form to local needs.
 - p. Study community voting results on financial issues affecting the industrial education programs to determine community support of the program.
 - q. Establish the criteria for selection of advisory committee members.
 - r. Know how to obtain administrative approval for organizing and selecting an advisory committee.
 - s. Invite resource persons who can provide consultation service to attend advisory committee meetings.
 - t. Identify the role and function of advisory committees.
 - u. Plan the annual agenda to be considered by advisory committees.
 - v. Consult the advisory committees in planning an analysis of an occupation.
 - w. Determine the occupations for which training is to be offered in industrial education programs.
 - x. Consult advisory committees to obtain information concerning their expectations of industrial education programs.
 - y. Consult advisory committees in developing long-range program plans for industrial education.
 - z. Obtain from the advisory committees information on ways to improve related instruction and on-the-job training.
 - aa. Provide for group decisions, or recommendations, on proposed programs.
2. Topical Content Outline and Strategies:
- a. Needs assessment as a basis for curriculum development.
 - (1) Have students read Chapter One in Basic Principles of Curriculum and Instruction by Tyler.
 - (2) Provide orientation lecture describing nature and purpose of needs assessment techniques.

b. Industrial Education Survey

- (1) Bring to class several industrial education surveys and have students browse through these for familiarity.
- (2) Have students assigned to small groups to conduct a survey.
- (3) Inquire whether the communities students come from have conducted an industrial education survey -- obtain a copy for review.

c. Advisory Committees

- (1) Invite members of an advisory committee in to class to discuss the role, nature and functions of advisory committees.
- (2) Have class prepare list of community resources that can be used to assist advisory committee in its decisions.
- (3) Assign reading in state published handbook on advisory committees.
- (4) Have class generate criteria for selecting advisory committee members.
- (5) Attend one or two advisory committee meetings.

B. Establishing overall aims:

1. Competencies:

Upon completing the proposed curriculum, the prospective teacher will be able to:

- a. Plan the overall objectives and curricula for the total school program.
- b. Suggest an industrial education program based on analysis of the vocational education survey.
- c. Show knowledge of the reference materials and literature related to reaching the exceptional student.
- d. Develop processes for overcoming obstacles to building a good program.
- e. Know the provisions made for the maladjusted or handicapped under existing local, state, and federal law.
- f. Set up a program within existing employment laws.
- g. Specify the long-range facility, equipment and supply needs for the industrial education program.
- h. Prepare and analyze the long-range program, purpose and objectives, for industrial education in the school.
- i. Prepare a long-range budget which identifies the financial needs of the industrial education program.
- j. Prepare a capital outlay budget proposal for new equipment needed in an industrial course.

- k. Prepare a budget for estimated travel expenses incurred in industrial activities.
 - l. Develop industrial courses by clustering and sequencing related tasks.
 - m. Assist in writing general objectives for courses offered in the industrial education program.
 - n. Write student performance goals for the industrial education courses.
2. Topical Content Outline and Strategies:
- a. Aims of industrial education
 - (1) Obtain list of aims for industrial education programs from state department and national office of American Vocational Association and American Industrial Arts Association.
 - (2) Write a philosophy of industrial education which includes (a) Statement of philosophical position, (b) General aims, (c) Program sequence from kindergarten through adult levels, (d) Type of facilities needed, and (e) Characteristics of teachers desired.
 - b. Laws affecting industrial education program development
 - (1) Listen to video tape lecture or guest speaker on local, state and national laws affecting industrial education program development.
 - c. Preparation of budgets for industrial education programs.
 - (1) Obtain a copy of a program budget for study and analysis.
 - (2) Visit and talk with school superintendents and curriculum specialists on budget preparation for programs.
 - (3) Have students prepare and monitor a budget that can be used in the home to gain skill in budgeting and allocation of resources.
 - (4) Prepare long range capital outlay budget based on proposed curriculum.
 - d. Course selection
 - (1) Study school and community survey to determine needed industrial education courses. Meet with advisory committee to discuss course selections.
 - (2) Divide class into small groups representing specific courses selected and develop general objectives for the courses. Each group can report on their decisions to rest of class for feed back.

C. Task Analysis Technique for Content Selection

1. Competencies:

Upon completing the proposed curriculum, the prospective teacher will be able to:

- a. Identify personal, social and academic competencies required for the performance of each occupational task included in a course.
- b. Organize instructional sequences in content areas; in reading, mathematics, language.
- c. Analyze an instructional task into component parts.
- d. Describe the occupational standards of performance for each task in an occupation.
- e. Sequence a series of tasks from simple to complex.
- f. Sequence performance goals (objectives) for a course.
- g. Write performance objectives in each of the domains of industrial objectives (cognitive, affective, psycho-motor.)

2. Topical Content Outline and Strategies:

- a. The task analysis technique as a tool for industrial education course content selection.

- (1) Have class read Mager and Beachs': Developing Vocational Programs.
- (2) Discuss advantages and disadvantages of task analysis as a technique for content selection.
- (3) Discuss how clustering of content can be accomplished through a task analysis.

- b. Occupational analysis

- (1) Visit a person in a selected occupation and do a task analysis of the skills and related information. Use the procedure described in Mager and Beachs' book.
- (2) Validate the skills and related information developed from a task analysis by using industrial management and union representatives, apprentice program directors, industrial educators and selected persons in the occupation.
- (3) Arrange skills and related information obtained from a task analysis in a simple to complex order.

- c. Performance Objectives

- (1) Read Mager's Preparing Instructional Objectives and discuss concept of behavior modification.
- (2) Select a specific task from the analysis and translate it into behavioral terms using the three criteria proposed by Mager in his book on Preparing Instructional Objectives.

- (3) Have students observe a series of film strips on how to write behavioral objectives then ask them to write five or six objectives in behavioral terms.
- (4) Provide a programmed booklet on understanding and writing behavioral objectives for students to complete.
- (5) Write two objectives in each of the three domains of educational objectives - cognitive, affective, and psychomotor.

D. Unit Planning

1. Competencies:

Upon completing the proposed curriculum, the prospective teacher will be able to:

- a. Involve students in planning a unit.
- b. Correlate unit content with on-the-job and/or laboratory experiences.
- c. Write content outline for a unit of instruction.
- d. Identify the unit topics for a course.
- e. Determine objectives for a unit.
- f. Select methods of evaluating students' performance throughout a unit.
- g. Plan a variety of vocational experiences at both observation and involvement levels.
- h. Plan for step-by-step development of social controls.
- i. Plan for participation of pupils in setting standards of conduct.
- j. Provide real-life experiences in daily living.
- k. Develop, employ and analyze reinforcement contingencies.
- l. Plan esthetic experiences as part of units.
- m. Plan a program for developing good study habits.
- n. Plan for the development of individual pupil interests.
- o. Relate the instruction of health habits to real-life situations.
- p. Plan individualized instruction according to ability of students.
- q. Organize and select individualized program-instruction for each student.
- r. Plan field trips.

2. Topical Content Outline and Strategies:

- a. Rationale for unit planning.
 - (1) Have class review several units that have been developed by other teachers to analyze format.
 - (2) Visit a public school program and observe the teacher starting a unit in class.
 - (3) Develop an acceptable unit format for the class.
 - (4) Compare how textbook chapters correlate with the unit concept.

b. Writing units

- (1) Divide class into small groups of four or five and have each group select a unit to develop which can be duplicated for distribution to rest of class.
- (2) Have class divide into groups of four or five to analyze a selected course and list its major concepts (unit titles), sub-concepts, and mini-concepts. Be sure that agreement is maintained.
- (3) Have individual students contact teachers in the field and volunteer to assist in writing a unit for an on-going program.

c. Plan individualized instruction

- (1) Present each student with a learning activity packet (LAP) on How to Individualize Instruction and have them complete the packet.
- (2) Have students develop a learning activity packet using a programmed learning activity. This should be done in small groups. May use any topic as a theme. Try to employ a variety of instructional media in the program.

d. Plan variety of learning experiences in the units

- (1) Have students design an instructional sheet on how to conduct a field trip.
- (2) Have students view films or video tapes of classroom teachers in action and identify observed techniques used for individualizing instruction.
- (3) Arrange for a panel of in-service teachers to present various techniques they have used to enhance learning experiences.
- (4) Conduct contest in class to see who can list the highest number of unique learning experiences to accomplish a particular task of behavior change designated by the teacher.

e. Plan acceptable standards of student behavior.

- (1) Invite junior high and senior high students into class to discuss their opinions and suggestions for student conduct codes, social controls, study habits, and overall attitudes toward these standards.
- (2) Students may organize a pupil personnel system with emphasis on personal-social development of public school pupils particularly in leadership, cooperation and peer relationships.

E. Lesson Planning

1. Competencies:

Upon completing the proposed curriculum, the prospective teacher will be able to:

- a. Write a lesson plan that identifies specific outcomes, designates methods and media, and provides for evaluation.
- b. Write behavioral objectives for all assignments.
- c. Prepare instructional materials (both hard and soft copy) using a variety of reproduction techniques.
- d. Develop alternative modes for repetition of content.
- e. Develop remedial techniques that will reinforce the lesson content for students who need additional help.

2. Topical Content Outline and Strategies:

a. Elements of lesson planning

- (1) Review basic learning theory and its relevance for lesson planning.
- (2) Have prospective teachers observe demonstrations of several lessons to identify their format and style. It is recommended that lessons observed be from a variety of academic subjects.
- (3) Have class develop a suitable lesson plan format that includes the essential elements.

b. Lesson objectives

- (1) Have prospective teachers read over several lesson plans that have had the objectives removed to see if they could determine the exact behavior changes desired in the lessons.
- (2) Have prospective teachers develop specific behavioral objectives for the lessons identified in the unit planning phase. Analyze these objectives and identify their levels in the three domains of educational objectives.

c. Instructional materials to assist lessons.

- (1) Take group to instructional materials center on campus and review the facilities available for developing instructional materials to assist in lesson planning and teaching. Have personnel from the media center prepare a display of materials that can be used in lessons for class review.
- (2) Have class prepare a bulletin board or table display of instructional media that can be used in lessons.

F. Evaluation

1. Competencies:

Upon completing the proposed curriculum, the prospective teacher will be able to:

- a. Evaluate periodically one's educational philosophy in relation to that held by a majority of other members of the teaching profession.
- b. Expand instruction for student on the basis of information obtained from employers on new technology.
- c. Review supervisory evaluation reports for assessing the industrial education programs.
- d. Assess the adequacy of the industrial education facilities and equipment relative to technological changes.
- e. Design evaluation techniques that incorporate a variety of types of performance.
- f. Analyze enrollment trends to determine student and parent acceptance of the industrial education programs.
- g. Assess the relevancy of the industrial education course offerings.
- h. Assess the safety provisions of the facilities and equipment of training stations.
- i. Assess educational adequacy of the training stations' facilities and equipment.
- j. Formulate procedures which provide for students' participation in the evaluation of instruction.
- k. Establish criteria for selection of students.
- l. Review student performance goals developed for the program plan.
- m. Develop a grading system for performance for related instruction, laboratory instruction, and/or on-the-job instruction.
- n. Design a student self-evaluation instrument.

2. Topical Content Outline and Strategies:

- a. Techniques for program evaluation
 - (1) Given an instructional program which is fairly well defined and planned, have students brainstorm as many techniques as possible which can be used for program evaluation. Compare this list to an agreed upon criteria for selection of techniques.
 - (2) Meet with representatives from Educational Testing Service in class or at ETS to discuss different program evaluation techniques available and those that seem feasible.

- b. Points to be assessed
 - (1) Have class identify the main points in a program that should be evaluated and determine the frequency of evaluation.
- c. Student involvement in evaluation
 - (1) Have class meet with a group of selected public school students to plan guidelines for student participation in program evaluation.
 - (2) Design a plan for student involvement in evaluating industrial education programs.
- d. Performance based evaluation
 - (1) Assign a task force within the class to develop a performance based evaluation instrument and test it on a selected portion of an industrial education program.
 - (2) Collect available performance tests for examination and analysis to determine their structure and adaptability to programs.
 - (3) Work with an evaluation team from the state or an evaluating agency to gain experience in administering performance tests.

G. Administrative Functions

1. Competencies

Upon completing the proposed curriculum, the prospective teacher will be able to:

- a. Supply administrators with data for industrial education reports required by the state department of education.
- b. Obtain reimbursement for the student for allowable training costs such as clothing and tools.
- c. Establish a policy for use of the physical facilities by outside groups and other school personnel.
- d. Develop communication strategies to explain and promote industrial education in the school and community.
- e. Prepare total budget for operation of an industrial education program.
- f. Plan inservice programs for teachers.

2. Topical Content Outline and Strategies:

- a. Reports required of industrial education administrators and teachers.
 - (1) Obtain sample copies of reports from State Department or local school district. Review report forms for nature and scope of information needed.
 - (2) Role play U. S. government and allocate several million dollars to states, then determine which types of reports are essential and which are "nice to have." Compare this with what is required now.

b. Budgeting procedures

- (1) Select an ideal teaching situation in a vocational program and determine how much money would be needed to operate the program. Develop budget categories.
- (2) Assist a school superintendent in the preparation and presentation of an industrial education program budget.
- (3) Role play two groups in class: one - a school district superintendent presenting a budget to group, two - a State Department committee responsible for critically analyzing budgets and making recommendations for approval or disapproval. Identify major arguments in the exchange.

c. Administrative control of physical facilities

- (1) Invite a panel of school administrators and teachers to discuss their responsibilities for the physical plant. Clarify these responsibilities.
- (2) Have students do a case study on selected administrators to determine the nature and extent of their responsibilities for control of the operation and care of physical facilities.

d. Communication strategies

- (1) Survey newspapers and journals for previous six months to collect articles related to attempts or lack of attempts of administrators to communicate to teachers, students, parents, and the community at large.
- (2) Review proposed communication models and discuss how they can be implemented to enhance the problem of communications.

e. Inservice programs

- (1) Have group visit teachers to ascertain their needs and desires for inservice programs. Check various programs to see if they seem to fit these needs.
- (2) Design several inservice programs proposed to meet the needs ascertained from consultation with teachers.

H. Co-Curricular Activities

1. Competencies

Upon completing the proposed curriculum, the prospective teacher will be able to:

- a. Assist students in advancing within the available degrees in the student vocational organization.

- b. Organize a student committee to assess the interest of students in joining student vocational organizations.
- c. Plan ways to involve students in clubs, organizations, special events, and course related activities.
- 2. Topical Content Outline and Strategies:
 - a. Student clubs and associations
 - (1) Attend a state or national convention that has student clubs or organizations represented and share ideas on the nature and value of student organizations.
 - (2) Divide class into teams of two and send these teams to visit a variety of student club meetings to learn how they are organized, their purpose, membership and contribution.
 - b. Curriculum related organizations
 - (1) Show film on curriculum related (co-curricula) organizations of industrial education.
 - (2) Compare achievement of students who are members of co-curricula clubs and organizations with students who are not members.

I. Work-Study Internship

1. Competencies

The following competencies should be developed in a structured intern program where the prospective teacher works directly with a certified cooperative education coordinator. The prospective teacher will work as an assistant to the coordinator and become directly involved in the following:

Upon completing the proposed curriculum, the prospective teacher will be able to:

- a. Identify prospective cooperating employers to provide on-the-job training stations.
- b. Convince an employer to provide a training station for cooperative education.
- c. Assist the cooperating employer in verifying the legality of employing a student-learner in a hazardous occupation.
- d. Assist the cooperating employer's personnel in accepting the training status and role of the student-learner.
- e. Arrange with a union to make contract provision for student-learners.
- f. Establish criteria to evaluate qualifications of prospective on-the-job instructors.
- g. Develop a cooperative training agreement between student-learner, parent, school, and cooperating employer.

- h. Describe the procedure for a cooperating employer to use in acquiring a federal permit to pay a training wage.
 - i. Determine federal and state wage and hour classification of the prospective cooperating employer.
 - j. Obtain reimbursement for the cooperating employer providing on-the-job training.
 - k. Develop criteria to approve on-the-job training hours and wages for student-learners.
 - l. Obtain suggestions from the on-the-job instructor to guide the selection of related class instruction.
 - m. Develop a systematic training plan with the on-the-job instructor.
 - n. Encourage the on-the-job instructor to follow the progression of experiences for the student-learner outlined in the training program.
 - o. Assist the on-the-job instructor with development of teaching techniques during visits to the training stations.
 - p. Conduct termination procedures for on-the-job training for the student-learner when conditions demand it and at the close of a training program.
 - q. Inform the administration of daily coordination itinerary.
 - r. Maintain liaison with employment agencies and the community.
 - s. Develop plan for a training workshop to assist on-the-job instructors in techniques for teaching student-learners.
 - t. Keep up to date with trends and skills in the selected field of study.
 - u. Develop positive attitudes toward employment, school and the role of the training instructor.
 - v. Develop acceptable work habits.
 - w. Maintain knowledge of current programs available in vocational education.
2. Topical Content Outline and Strategies:
- a. Identifying a cooperative education center
 - (1) Survey the community to determine potential cooperative education centers.
 - (2) Select specific employers and seek their interest in providing a cooperative education center.
 - b. Selection of training station and instructors
 - (1) Prepare guidelines for a cooperative training agreement between student, parent, school, and employer.
 - (2) Meet with interested employers to describe requirements and purpose of cooperative training programs.

- (3) Establish criteria to select training stations and on-the-job instructors.
- (4) Consult a lawyer to verify legality of student employment in industry, particularly in hazardous areas.
- (5) Visit training stations recommended and interview instructors to determine selection of centers.
- c. Determine student wage and instructor reimbursement standards
 - (1) Identify procedure for cooperating employer to use in acquiring a federal wage permit.
 - (2) Survey other cooperative programs to ascertain state wage and hour classification systems, instructor reimbursement and student wage levels.
 - (3) Examine and discuss criteria for approval of wage and reimbursement procedures.
- d. Program development
 - (1) Arrange group meetings with cooperating employers and instructors to develop a systematic program for training students.
 - (2) Have instructors assist in developing a progression of learning experiences for students to follow.
 - (3) Provide for conference and feedback system with instructors and employers to identify problems in the training program and make adjustments as needed.
 - (4) As program is being developed, keep other appropriate personnel in the industry and the school informed.
- e. Supervision of Cooperative programs
 - (1) Plan beginning and termination procedures for students to follow as they start and complete their training program.
 - (2) Design troubleshooting techniques to solve problems encountered or projected in the training centers.
 - (3) Design a community relations program to keep the community informed of progress in the cooperative programs.
 - (4) Survey on-the-job instructors periodically to determine their needs and develop inservice programs to assist them in meeting these needs, i.e., teaching techniques, human relations and program planning.

- f. Student attitudes toward employment
 - (1) Administer pre and post tests to determine student attitudes as they enter and leave a cooperative training experience. Analyze the results to determine (a) where attitude change has occurred (if any), and (b) what variables caused the change.
 - (2) Provide bulletin boards and displays in school and in the cooperating agency which will motivate students to keep up to date with their field of specialization.

II. METHODS OF TEACHING

A. Knowledge of Teaching-Learning Problems

Specific to the handicapped

1. Competencies

Upon completing the proposed curriculum, the prospective teacher will be able to:

- a. Describe relationship between mental ability and educational independence of the individual.
- b. Know the degree to which mental/physical handicaps affect academic and social learning.
- c. Indicate open-ended opinion of the learning abilities of the handicapped.
- d. Describe current instructional practices and techniques for the handicapped.
- e. Match a student-learner's unique characteristics with an appropriate learning program.
- f. Know materials available for specific instructional situations.
- g. Use instructional hardware, i.e., T.V., projectors, fixed machines.
- h. Develop teacher-made materials for specific instructional situations.
- i. Know the scope and sequence of fundamental skills in mathematics and reading.

2. Topical Content Outline and Strategies

a. Survey of Educational Problems of the Handicapped Learner

- (1) Selected readings from textbooks and journals.
- (2) Films.
- (3) Direct observation of the handicapped in a variety of settings.
- (4) Seminar with educational specialists.

b. Survey of Teaching Materials

- (1) Review catalogs for academic and industrial education materials.
- (2) Vendor demonstration.

- (3) Using a scope and sequence in mathematics and reading skills, develop lists of materials appropriate to skill development.
- (4) Set up and use hardware for demonstration of Audio Visual materials.
- (5) Direct observation (classroom on closed circuit T.V.) of the use of materials.
- (6) Have small groups develop instructional uses for free or inexpensive materials.
- (7) Adapt vendor material for special problems, i.e., figure-ground, limiting set, repetition, limited vision, limited movement.

B. Managing the Learning Environment

1. Competencies

Upon completing the proposed curriculum, the prospective teacher will be able to:

- a. Identify new tools and equipment needed in an industrial education course for the academic year.
- b. Compile a list of supplies needed for the academic year.
- c. Plan an operating budget proposal for consumable supplies, services and materials needed in an industrial education course.
- d. Design a procedure for acquiring the consumable supplies and materials needed in an industrial education course.
- e. Prepare purchase requests for approved industrial education equipment and supplies.
- f. Prepare purchase requests for book and non-book instructional materials.
- g. Prepare a five-day schedule including individual, small group, and large group instructional time segments.
- h. Schedule laboratory equipment for maximum utilization by students.
- i. Arrange simulated school and work schedules with student-learners, faculty and training station personnel.
- j. Develop a system to control the transfer of student-learners within the cooperative program and to other school programs.
- k. Plan the organization of facilities, materials, and services needed for individual and small group instruction.
- l. Arrange layout of the laboratory to simulate occupational environment.
- m. Plan placement of a variety of leisure activities during school day.

- n. Simulate placement of consumable supplies for instructional purposes.
 - o. Arrange the laboratory work areas and storage space to facilitate student work performance.
 - p. Plan for proper physical conditions in the classroom and laboratories.
 - q. Plan instructional sequences in laboratory safety.
 - r. Know about approved safety apparel and devices for industrial education students assigned to hazardous equipment.
 - s. Establish a procedure for attending first aid needs of industrial education students.
 - t. Develop a plan for involving students in cleaning and maintaining the laboratory and classroom.
 - u. Establish a system for repairing and servicing tools and equipment in the laboratory.
 - v. Develop student "check out" procedures for tools, supplies, and equipment used in the laboratory.
 - w. Devise a system for determining and collecting student fees for consumable supplies.
 - x. Keep simulated records of pupil attendance, behavior and achievement.
 - y. Use a variety of student's progress record forms for on-the-job training and related instruction.
 - z. Develop simulated records of individual work hours, wages, and work progression of on-the-job training.
 - aa. Re-cycle student progress through the use of example operation and/or job sheets.
 - bb. Structure a filing system for records, report forms and instructional materials used in an industrial education course.
 - cc. Provide an example record of safety instruction presented in compliance with safety laws and regulations.
 - dd. Develop a simulated inventory system for industrial education tools, supplies, and equipment assigned to the laboratory.
2. Topical Content Outline and Strategies:
- a. Budgeting and Purchasing
 - (1) Examine and compare examples of average budgets and purchase requests from a variety of school programs.
 - (2) Research model programs described in the literature.
 - (3) Visit a variety of industrial education classrooms.
 - (4) Invite guest lecturers who are involved in programs to discuss their budgeting-purchasing procedures.

- (5) Divide into small groups and set up a year's purchases, using an average budget, and revise purchases according to a simulated "cut" in the budget.
- b. Scheduling
 - (1) Review model schedules of various types.
 - (2) Discuss pros and cons of various schedules with guest lecturers from school programs, work-study programs, sheltered workshops, and employers.
 - (3) Involve students in devising and evaluating simulated schedules.
 - c. Classroom - Laboratory Arrangement
 - (1) Analyze floor plans for flow, ease of maintenance, quiet areas, safety, etc.
 - (2) Make a paper model of a classroom-laboratory, including placement of facilities, breakdown of stored and open material areas, and physical conditions (lighting, seating, etc.)
 - (3) Plan an "Interest Development Center" for a classroom, including materials for student-learner use.
 - (4) Visit Classroom-Laboratories for purposes of noting and comparing physical arrangement.
 - d. Safety
 - (1) Read and discuss State and industry safety regulations.
 - (2) Review the literature on safety problems for the handicapped.
 - (3) View an emergency situation on film and discuss adequacy of procedures.
 - (4) Read and simulate basic first-aid information and procedures.
 - (5) Provide demonstrations of safety apparel and devices.
 - e. Procedures for Maintenance
 - (1) Rotate responsibility for check-out, service, clean-up and fee-collection. Require a systematic report from each group at regular intervals.
 - (2) Read and discuss machine-shop maintenance manuals.
 - (3) Develop chart for rotating classroom-laboratory jobs.
 - f. Record keeping
 - (1) Lecture and demonstration of recording techniques related to instructional objectives, including charts, checklists, verbal/social behavior, attendance, and long-range achievement.

- (2) Evaluate example academic records.
- (3) Invite teachers and employers to describe record-keeping necessary to their situations, and to share samples with the students.
- (4) Using prototype job progress sheets, point out areas of strength and weakness in the student-learner.

C. Active Instruction

1. Competencies

Upon completing the proposed curriculum, the prospective teacher will be able to:

- a. Plan a drill-mastery hierarchy for basic skills.
- b. Plan example lessons in which Structure or Divergency is reinforced in the learner.
- c. Relate the instruction of basic academic skills to real-life situations.
- d. Relate the instruction of basic social skills to real-life situations.
- e. Be able to group children on a variety of parameters.
- f. Adapt follow-up activities from a group presentation to individual skills within the group.
- g. Propose specific action for resolution of learning/behavior problems.
- h. Develop Behavior Modification schedules for academic and industrial education learning experiences.
- i. Set up specific plan for parent/volunteer tutoring in problem areas.
- j. Demonstrate skill in using the basic communication model.
- k. Modify directions according to language comprehension ability of student-learners.
- l. Communicate specific requirements to student.
- m. Use a variety of techniques for presenting instructional content, including programmed instruction, case studies, symposia, student involvement, problem solving, lecture, demonstration, simulation, independent study, and various A.V. media.
- n. Establish frames of reference to enable the students to understand a situation from several points of view.
- o. Employ oral questioning techniques.
- p. Reward pupil growth other than mastery.
- q. Demonstrate knowledge of techniques for maintaining classroom discipline.
- r. Describe techniques of relating to individuals in groups.
- s. Move among pupils and confer individually.
- t. Avoid identical, stereotyped demands on maladjusted pupils.

- u. Provide alternatives to frustration behavior.
 - v. Recognize and acknowledge student non-verbal cues.
 - w. Apply non-verbal techniques (gestures, facial expressions, silence, etc.) to enhance communications.
 - x. Establish limits firmly and consistently.
 - y. Be able to cope with students' psychic needs.
 - z. Demonstrate restraint under verbal and physical attack.
 - aa. Point out pupil errors in solution-oriented fashion.
 - bb. Use humor with a relaxed inoffensive effect.
 - cc. Accept and/or clarify pupil statements in a positive or neutral fashion.
 - dd. Formulate with students acceptable standards of behavior in laboratories.
 - ee. Develop techniques for classroom interaction.
 - ff. Plan methods of giving attention to individual questions or requests for help.
 - gg. Diagnose learning deficiencies using immediate observation.
 - hh. Assess student gains independently by using pre-post testing techniques.
 - ii. Evaluate students' products according to performance standards of the occupations.
 - jj. Use various techniques for describing behavior.
 - kk. Construct tests based on pre-planned content and outcomes.
 - ll. Assess occupational experience reports with the student to plan future instruction.
 - mm. Review student progress and/or achievement records to assess effectiveness of instruction.
 - nn. Interpret students' evaluation of instruction.
 - kk. Modify teaching strategy or techniques based on knowledge of effectiveness.
2. Topical Content Outline and Strategies
- a. Teaching Strategy
 - (1) Review literature on variety of instructional strategy types. Discuss the demonstrated effectiveness for the handicapped. Emphasize drill-mastery in both tutorial and independent situations, inquiry strategy, independent study packets, grouping, shaping, and concretizing experiences.
 - (2) Organize problem-solving sessions to match strategy to group needs.
 - (3) After viewing classrooms by closed-circuit T.V., identify the reinforcers (both anticipated and unanticipated.)

- (4) Review the principles of operant theory.
- (5) Role play parent conferences, in which parents are given specific information for assisting children.
- (6) Using prototype problems, have students pinpoint desired behavior.
- (7) Schedule the reinforcer, and plan for re-check, 2nd or 3rd trials, and paired reinforcers.
- (8) Demonstrate use of concrete materials in concept and skill development.
- (9) Have prospective teachers develop demonstration lessons based on Persisting Life Functions. Tape and evaluate on a concrete/abstract scale.
- (10) Lecture on structure and divergency as strategies for underemitters and overemitters of behavior.
- (11) Analyze complex skill combinations for shaping possibilities.

b. Teaching Techniques

- (1) Lecture and provide examples of techniques for
 - (a) Drill-mastery.
 - (b) Teacher information-giving.
 - (c) Teacher direction-giving.
 - (d) Supplementing talk with visual aids.
 - (e) Supplementing talk with concrete materials.
 - (f) Guiding by suggestion.
 - (g) Problem-solving by student-learners.
 - (h) Incorporating review, action, and prediction into same lesson.
- (2) Practice generating questions based on a taxonomy of classroom questions.
- (3) Observe classroom instruction and identify techniques used.
- (4) Have prospective teachers use programmed material.
- (5) Have prospective teachers use A-V equipment.
- (6) Have prospective teachers develop A-V materials.
- (7) Have prospective teachers develop independent study packets and plan system for checking and re-cycling.

c. Teacher-Student Interaction

- (1) Read literature on teacher-student interaction. Discuss long-term effects of interaction types on student attitudes.
- (2) Observe instruction and record teacher-student interaction.
- (3) Show film on non-verbal cues. Discuss examples of involvement, stress, fatigue, aversion, happiness, etc.

- (4) Teacher acts as model, indicating enthusiasm for content, openness, warmth, and availability to students. Teacher uses inquiry and involvement, and encourages student responses.
- (5) Demonstrate coping with frustration behavior by limiting and supporting the performance required. Involve students in using a task complexity analytic scheme based on the elements of the task, and on Bloom's taxonomy.
- (6) Emphasize importance of consistency in managing behavior.

d. Pupil Performance Evaluation

- (1) Involve students in developing criteria for immediate evaluation in all of the presentation techniques (2a). Use both on-the-spot recording and delayed recording.
- (2) Use textbook or instructional packet on developing tests and test items.
- (3) Observe a tutorial situation and make a record of responses based on an ascending order of complexity.
- (4) Read and discuss observation, evaluation and recording of psycho-social growth according to Erikson, Hewitt, or other developmental scales.
- (5) Make analyses of student gain using prototype pre-post tests.

e. Lesson Evaluation

- (1) Discuss relationship between student achievement and teaching effectiveness. Review literature.
- (2) Contrast (in discussion) evaluation based on insight and evaluation based on evidence.
- (3) Given an evaluation of a unit that includes information on strategy, technique, pre-post testing, and student evaluation, the students will reject, modify, re-implement, or advance, all or parts of, the unit.
- (4) Teacher will provide opportunities for students to participate in the evaluation process by developing evaluation criteria, contracting, and through course evaluation.

D. Adjunctive Involvement

1. Competencies:

Upon completing the proposed curriculum, the prospective teacher will be able to:

- a. Demonstrate flexibility and ingenuity.
- b. Encourage students to discuss career aspirations.
- c. Experiment with alternative and/or innovative techniques.

- d. Develop high motivation in students towards achieving goals.
 - e. Demonstrate a regard for and an interest in students as individuals.
 - f. Obtain approval from the school administration for establishing the student industrial education organization.
 - g. Organize a student committee to assess the interest of students in joining the student industrial education organization.
 - h. Plan for, implement, and supervise activities for a student industrial education organization.
 - i. Participate in non-instructional school duties, i.e., cafeteria, homeroom, bus duty, chaperoning, PTA.
 - j. Contact state department personnel regarding the steps to be followed in organizing the student industrial education organization.
 - k. Plan the school-community relations activities for the industrial education program.
 - l. Recommend reference books and periodicals related to industrial education that should be added to the library.
 - m. Accept gifts or donations of supplies and equipment for the industrial education program in accordance with school policy.
2. Topical Content Outline and Strategies:
- a. Teacher as an adult model in the classroom
 - (1) Read and discuss literature pertaining to need to identify with concerned adult.
 - (2) Construct psychological model of ideal teacher and attempt to predict this teacher's behavior in a variety of example situations.
 - (3) Acquaint students with prototypes for innovation. Discuss need for alternative or innovative techniques. Reinforce student innovative efforts.
 - (4) Provide film models and research data on relationship between teacher's motivational behavior and student achievement.
 - b. Extra-Curricular-school
 - (1) Invite classroom teachers to describe and discuss with prospective teachers the advantages in working with students outside the classroom.
 - (2) Invite parents to tell prospective teachers their feelings on the importance of teacher involvement in hobby groups, P.T.A., etc.
 - (3) Encourage student campus organizations to volunteer to work with the handicapped.

c. Extra-Curricular-community/professional

- (1) Provide experience in public relations by having students:
 - (a) Contribute articles of letters to campus or local newspapers.
 - (b) Man convention booths.
 - (c) Act as resource speakers for information programs.
- (2) Require reading from a sufficient variety of periodicals and books relating to the profession and to the handicapped.
- (3) Teacher acts as model in personal participation in professional organizations and bringing the activities of these organizations to the students.

III. EDUCATIONAL PSYCHOLOGY

A. Learning Theories

1. Competencies:

Upon completing the proposed curriculum, the prospective teacher will be able to:

- a. Conceptualize various theories of learning.
- b. Use principles of operant conditioning.
- c. Exhibit a knowledge of students based on learning theory.

2. Topical Content Outline and Strategies:

- a. Identification of learning theories.
 - (1) Analyze and discuss the similarities and differences between several learning theories.
 - (2) Role play supporter of various learning theories for purposes of discussion.
- b. The use of learning theories.
 - (1) Determine appropriate learning theories and teaching strategies from case study.
 - (2) Analyze a group of teaching strategies in terms of appropriate learning theories.

B. Educational Measurement

1. Competencies:

Upon completing the proposed curriculum, the prospective teacher will be able to:

- a. Interpret students' evaluation of instruction.
- b. Select, administer and educationally interpret the results of standardized diagnostic and achievement tests.

2. Topical Content Outline and Strategies:

- a. Tests and scales.
 - (1) List and discuss several standardized tests for applicability to students in the program.
 - (2) Analyze several standardized tests for appropriateness and useability with students.

- b. Construction of objective measurements.
 - (1) Discuss and practice test construction with attention to validity, reliability, and appropriateness for students in the program.
 - (2) Analyze teacher made tests for use with students in the program.

C. Human Growth and Development

1. Competencies:

Upon completing the proposed curriculum, the prospective teacher will be able to:

- a. Identify strengths and weaknesses of the student.
- b. Identify the elements of both normal and abnormal growth and development at various age levels.
- c. Match a student's unique characteristics with an appropriate training station.
- d. Formulate with students acceptable standards of behavior in laboratories; and maintain those standards.
- e. Evaluate the student's personal traits and behavior characteristics on the job.

2. Topical Content Outline and Strategies:

- a. Types of exceptional children.
 - (1) Prepare case studies of exceptional children.
 - (2) Prepare a series of teaching strategies for children based on case studies.
 - (3) Visit social agencies concerned with exceptional children.
- b. Identifying exceptional children.
 - (1) Analyze case studies of exceptional children.
 - (2) Compile lists of distinguishing characteristics for the various categories of exceptional children.
 - (3) Observe groups of exceptional children and discuss observations.

IV. HUMAN AND INTERCULTURAL RELATIONS

A. Educational Relations

1. Competencies

Upon completing the proposed curriculum, the prospective teacher will be able to:

- a. Maintain working relationships with the school supporting staff through cooperation and mutual effort.
- b. Maintain good relations with other schools.
- c. Involve an advisory committee in conducting an industrial education survey.
- d. Assist teachers who are new in the system to understand the policies and regulations of the school.
- e. Develop a personal philosophy about "how man relates to his environment."

- f. Demonstrate restraint under verbal and physical attack.
 - g. Recruit teachers and guidance counselors to participate in conducting an industrial education survey.
 - h. Serve as the liaison for an advisory committee and the school administration.
 - i. Assist in the development of policies regarding school-community relations.
 - j. Orient the advisory committee members to their role and function.
 - k. Conduct opinion surveys in the school and community concerning the industrial program.
 - l. Use the advisory committee to help to improve related instruction and on-the-job training.
 - m. Use the advisory committee for information concerning their expectations of the industrial program.
 - n. Devise a plan of activities for a survey staff to follow in conducting an industrial education survey.
 - o. Use the advisory to help plan an analysis of an occupation.
 - p. Organize a steering committee to assist in the pre-planning activities of an industrial education survey.
 - q. Establish criteria for evaluating training station of an employer.
 - r. State opposing points of view objectively.
 - s. Identify the role and function of the advisory committee.
 - t. Plan the annual agenda to be considered by the advisory committee.
 - u. Use the advisory committee for help in developing a long-range program plan for industrial education.
 - v. Invite resource persons who can provide consultation service to attend the advisory committee meetings.
 - w. Identify and use a variety of community agencies and resources.
2. Topical Content Outline and Strategies:
- a. Use of community resources.
 - (1) Compile a list of social agencies.
 - (2) Visit several social agencies.
 - (3) Work, for a short period, with one social agency.
 - (4) Compile a list of prospective members for a hypothetical advisory committee.
 - (5) Plan a detailed agenda for a hypothetical advisory committee meeting.
 - (6) Design and write a letter of invitation for membership to an advisory committee.

b. Teachers' professional relationships.

- (1) Compile a list of areas within the school that, through academic cooperation, mutual benefit could be derived.
- (2) Identify institutions of higher education, particular divisions and departments, and particular educators who could be of help in setting up or improving a program.
- (3) Plan a committee using educational administration in evaluating the performance of the program.

B. Political Relations

1. Competencies:

Upon completing the proposed curriculum, the prospective teacher will be able to:

- a. Work with a team of professionals from the school and/or community on pertinent school problems.
- b. Maintain liaison with state department personnel.
- c. Persuade labor representatives to participate in industrial education survey.
- d. Arrange with a union to make contract provision for students.
- e. Maintain liaison with union officials and employers.
- f. Solicit assistance of the vocational education personnel from the state department in conducting an industrial education survey.
- g. Consult the Chamber of Commerce to identify area employers to be contacted in an industrial education survey.
- h. Obtain administrative approval for organizing and selecting the advisory committee.
- i. Contact state department personnel regarding the steps to be followed in organizing a student organization.

2. Topical Content Outline and Strategies:

a. Community political influences

- (1) Compile a list of local unions and union leaders who could be of assistance in developing or improving a program.
- (2) Compile a list and discuss possible problems that might arise between union and the education program.
- (3) Interview union leaders for views concerning an industrial education-special education program. Discuss these views in class.
- (4) Analyze public statements by public officials for the purpose of determining an appropriate method of approach for support of a program.

b. Administrative political influences.

- (1) Visit a school board meeting for the purpose of determining the best method of approach for support.
 - (2) Discuss public voting trends on school issues for political support.
 - (3) Compile lists and discuss local, state and federal legislation that affects the program.
 - (4) Compile a list of local political figures who might be most supportive of the program.
- Discuss the basis of that support.

C. Economic Relations

1. Competencies:

Upon completing the proposed curriculum, the prospective teacher will be able to:

- a. Maintain good working relationships with the training station personnel.
- b. Provide consultant services to local business and industry.
- c. Establish communications with employer representatives who will be involved in an industrial education survey.
- d. Assist the cooperating employer's personnel in accepting the training status and role of the student.
- e. Convince an employer to provide a training station for industrial education.
- f. Identify prospective cooperating employers to provide on-the-job training stations.
- g. Analyze occupations with assistance of employers and labor representatives.

2. Topical Content Outline and Strategies:

- a. School-to-employer relationships
 - (1) Through role-playing, set up conferences with employers and employees.
 - (2) Analyze the economic community for areas that the teacher's professional training could be used for consultancies.
- b. Job market analysis
 - (1) Design a questionnaire to determine the best possible training stations for students.
 - (2) Through role-playing, convince an employer to use his business as a training station for students.

D. Ethnic Relations

1. Competencies

Upon completing the proposed curriculum, the prospective teacher will be able to:

- a. Acquire information from members of the community power structure (e.g., political, social, economic

pressure groups) regarding their expectations of the industrial education programs.

- b. Maintain liaison with community professional, service, fraternal, social, and religious organizations.
 - c. Determine and understand cross-cultural values.
 - d. Serve community needs by contributing professional expertise to civic projects.
 - e. Demonstrate empathy for students.
 - f. Demonstrate techniques of introspection, e.g., sensitivity training, etc.
2. Topical Content Outline and Strategies:
- a. Analysis of various cultures
 - (1) Examine the nature and the development of culture.
 - (2) Discuss family systems, economic systems, ideologies, language systems, religions of American minority and ethnic groups.
 - (3) Discuss interaction of minority and ethnic groups with one another and with majority groups.
 - b. Psycho-social influence in cultural interaction.
 - (1) Identify psychological and social problems encountered by ethnic and minority groups.
 - (2) Examine psycho-social effects on developmental and learning processes.
 - (3) Discuss relationship of problems to urbanization, industrialization, technology.
 - (4) Observe institutions and facilities concerned with education, health, and welfare of students, i.e., public schools and institutions, social welfare agencies, juvenile courts, health and drug centers.

E. General Public Relations

1. Competencies

Upon completing the proposed curriculum, the prospective teacher will be able to:

- a. Present activities of the industrial education program by mass media.
- b. Publicize the purpose and objectives of an industrial education survey.
- c. Represent the teaching profession as a committee member or delegate to meetings and activities of other professions.
- d. Publicize the establishment of the advisory committee, its members, and its function to the school and community.
- e. Obtain informal feedback on the vocational program through contacts with individuals in the school and community.

- f. Provide for group decisions, or recommendations, on proposed programs.
 - g. Study community voting results on financial issues affecting the industrial education program to determine community support of the program.
 - h. Plan the school-community relations activities for the industrial education program.
 - i. Serve in a community civic, service or social organization to improve the image of the industrial education program.
 - j. Speak to school and community groups on the industrial education programs.
 - k. Provide displays in the school and the community on the industrial education programs.
 - l. Conduct an open house to familiarize members of the school and community with activities of the industrial education programs.
2. Topical Content Outline and Strategies:
- a. Analysis of public feelings towards the program.
 - (1) Discuss historical impact of federal and state legislation.
 - (2) Examine various types of surveys and polls used to determine public opinion.
 - (3) Compare techniques that have been most successful in influencing public opinion.
 - (4) Discuss economic and political issues currently included on school board and public ballots.
 - (5) Examine recent voting trends as related to economic and political issues including collection and treatment of quantitative and qualitative data analysis and inference.
 - (6) Prepare research designs including interview, questionnaire sampling.
 - (7) Observe public meetings at which economic and political issues are presented and debated.
 - b. Use of various techniques of public communication.
 - (1) Discuss techniques of public speaking including the use of oral language, body language, speaker-listener relationships.
 - (2) Discuss the use of principles of group dynamics and group decision-making.
 - (3) Discuss various types of propaganda devices.
 - (4) Examine and prepare various graphic visual materials for communicating ideas and concepts.
 - (5) Discuss the use of television as a method of communication.
 - (6) Compare radio spot announcements and panel discussions.
 - (7) Prepare television and radio programs.

V. FOUNDATIONS

A. The Study of Socio-Historical Relationships

1. Competencies:

Upon completing the proposed curriculum, the prospective teacher will be able to:

- a. Show an awareness of the culture and society of the students.
- b. Determine and understand cross-cultural values of students.
- c. Develop a personal philosophy about man's relationship to his environment.

2. Topical Content Outline and Strategies:

a. Education and culture.

- (1) Read selected books and articles concerning culture and education.
- (2) Develop and discuss the influence of culture upon the individual.
- (3) Select and contrast several different cultures of the world.
- (4) Review sociological studies of cultures with distinctly different values as the United States.
- (5) Analyze the biological and cultural differences of human nature.
- (6) Examine how cultural differences give rise to different school curriculums.
- (7) Chart specific social groups and their relationship to education.
- (8) List the basic characteristics of a social institution and relate these to the educational process.
- (9) List factors which bring about social changes.
- (10) View documentary films depicting other cultures of the world and compare differences with the United States.
- (11) Discuss the sociology of the school.
- (12) Examine specific processes for implementing social change in the school.

b. Education, Social Classes and Minority Groups

- (1) Read selected books and articles concerning education and minority groups.
- (2) Read selected books and articles dealing with the education of the culturally disadvantaged child.
- (3) Examine the nature of groups in disadvantaged areas.
- (4) Discuss class as a social phenomena.
- (5) List similarities and differences in class structure.

- (6) Discuss the fundamental characteristics of ethnic groups in the urban city.
 - (7) List and analyze the fundamental problems disadvantaged minority groups such as the American Indian, migrant workers and the like.
 - (8) Develop strategies for motivating culturally deprived child.
 - (9) Examine the self-concept acquired by the disadvantaged child.
 - (10) Visit or participate in various social agencies dealing with disadvantaged children or adults.
 - (11) List syndromes of social disorganization in "slum" or depressed areas.
 - (12) List and examine causes and influences of prevailing attitudes in depressed areas.
 - (13) Make audio or video taped recordings of interviews with culturally disadvantaged children. Record their perception of the role of education.
 - (14) Brainstorm in small groups more relevant experiences which could be provided disadvantaged children.
 - (15) Examine the teacher preparation for deprived children.
 - (16) Report on innovative programs for educating the disadvantaged.
 - (17) Examine cultural biases in standard tests and measures.
 - (18) List socio-psychological factors which affect school achievement.
 - (19) Examine basis weaknesses in tradition curriculums for disadvantaged children.
 - (20) Discuss the relevance of career education programs for all children.
 - (21) List personal prejudices or blind spots and action to be taken to correct these feelings.
 - (22) List specific teaching strategies for the culturally disadvantaged.
- c. Education and the Social Function of the School.
- (1) Read selected books and articles concerning the social role of the school.
 - (2) Examine the democratic tradition and the present social function of the school.
 - (3) List historical examples of contrasting conceptions of the social role of the school.
 - (4) Analyze the present relationship among church, state and school.
 - (5) Examine the social function of the school in relation to urban pathologies.

b. The Professional Educator and Student

- (1) Read selected books and articles concerning the professional commitment to students.
- (2) Develop video tapes depicting a teacher-student interaction problem.
- (3) Have a lawyer present actual cases involving legal responsibilities to student.
- (4) Develop specific methods for evaluating professional responsibilities to students.
- (5) List actions which violate the professional commitment to the student.
- (6) Role play discriminatory practices which have or might occur in a classroom.
- (7) List and discuss health and safety responsibilities.
- (8) View films which depict factors which contribute to favorable learning conditions.
- (9) Develop an evaluation check list for determining quality of physical facilities.
- (10) Develop and defend a code of ethics regarding confidential information, private advantage and other like concepts involving the rights of students.
- (11) Examine cross cultural values and commitments to students.
- (12) Discuss and analyze changing values and technological impact upon the long-range goals of students.

c. The Professional Educator and the Public

- (1) Read selected articles and books concerning the commitment of the professional educator to the public.
- (2) Analyze and discuss the educator's dedication to the democratic heritage.
- (3) Develop a sociogram of community organizations and determine the relationship of the educator and school to these organizations.
- (4) Brainstorm in small groups specific methods for creative public relations.
- (5) Develop a list of activities which might constitute conflict of interests.
- (6) Examine research studies and case histories of school projects and their impact upon the community.
- (7) Diagram models of communication and analyze how educators can improve their communication skills.
- (8) Examine methods of measuring public opinion.
- (9) Examine and diagram the true decision making power structure of a selected community.

- (10) Discuss the role and function of citizen advisory committees.
 - (11) Develop accountability measures for schools.
 - (12) Examine future trends in school and public relationships.
 - (13) Brainstorm new services which a professional educator might provide a community.
 - (14) Examine strengths and weaknesses of existing parent-teacher associations.
 - (15) Explore innovative programs or develop new programs which would improve the quality of urban communities.
 - (16) Develop a personal code of ethics concerning one's professional commitment to the public.
- d. The Professional Educator and Professional Organizations
- (1) Read current articles and books concerning the role and nature of the professional teacher and professional organizations.
 - (2) Analyze and critique the Code of Ethics of the Education Profession N.E.A.
 - (3) Develop a philosophical position regarding commitment to student, public and profession.
 - (4) Role play given professional problem situations.
 - (5) Invite professional teachers and administrator to discuss the role of the professional teacher.
 - (6) Correlate major philosophical positions and various historical roles of the teacher.
 - (7) Report on major trends in the education profession.
 - (8) Discuss "accountability" and other issues affecting the professional educator.
 - (9) Read and analyze stated goals of professional organizations.
 - (10) Develop a personal "plan of action" for improving one's professional career.
 - (11) State specific method of improving the profession through formal study.
 - (12) Brainstorm methods for improving the quality of the profession and self-correction.
 - (13) Diagram a chart showing existing professional organizations, their goals and responsibilities.
 - (14) Develop a list of professional standards and defend before the class.
 - (15) Examine criteria for evaluation of a profession.
 - (16) List and discuss major changes occurring in education and their impact upon the education profession and its responsibility to its members.

- (17) Examine sociological trends and their implications for the profession.
- (18) Analyze specific responsibilities implied by being a professional educator.
- (19) State definite steps one can use to improve cooperation of other people.
- (20) List specific factors which increase staff morale and specific factors which decrease staff morale.
- (21) Analyze what constitutes creative leadership.
- (22) List and analyze specific causes of failure by educators and indicate how each cause can be avoided or remedied.

C. Philosophical Relationship

1. Competencies

Upon completing the proposed curriculum, the prospective teacher will be able to:

- a. Express a philosophy compatible with that of the industrial education staff.
- b. Evaluate periodically one's educational philosophy in relation to that held by a majority of other members of the teaching profession.
- c. Express a philosophy compatible with the objectives of industrial education.
- d. Express a philosophy relevant to the basic goals of the teaching profession.
- e. State a personal philosophy about theories related to learning.
- f. State a philosophical position which is in keeping with one's personal and professional abilities and limitations.

2. Topical Content Outline and Strategies:

- a. Philosophy and Education.
 - (1) Read selected books presenting philosophy and education.
 - (2) Develop a chart showing major philosophical positions in history and the expression of this philosophy in educational thought and practice.
 - (3) Simulate classroom conditions if selected philosophers were teaching that class.
 - (4) Role play selected philosophers who visit the class and express their philosophical views.
 - (5) Develop a personal philosophy of education and defend this position before a class.
 - (6) Select and play for the class contemporary popular songs that express a specific philosophical viewpoint.
 - (7) View films that express a definite philosophical viewpoint and analyze these in group discussions.

- (8) Form encounter groups which analyze personal philosophical positions.
 - (9) Select news stories which represent moral and ethical viewpoint of man and society.
 - (10) Discuss cultural biases and personal philosophical positions.
- b. Philosophy and Industrial Education.
- (1) Read selected books and articles which present philosophies of industrial education for the handicapped and disadvantaged.
 - (2) Contrast objectives of industrial education in various historical periods.
 - (3) Develop a philosophical position concerning the disadvantaged and handicapped.
 - (4) Role play major philosophers expressing their views of industrial education.
 - (5) Role play major philosophers expressing their views of the handicapped and disadvantaged.
 - (6) Critique contemporary philosophical positions of industrial education.
 - (7) Role play a handicapped person in various social situations.
 - (8) Develop audio or video taped interviews of handicapped and disadvantaged persons seeking employment.
 - (9) View and analyze documentary films about major social problems in the urban setting.
 - (10) Visit or participate in vocational programs for the disadvantaged and handicapped.
- c. Philosophy and the Nature of Man.
- (1) Read selected books concerning philosophy and the nature of man.
 - (2) Discuss and compare historical, philosophical and religious view of the nature of man.
 - (3) Analyze various philosophical positions and their implications for the individual and role in society.
 - (4) Develop and defend a personal philosophical code of behavior.
 - (5) Develop a chart showing historical philosophical viewpoint and the concept of the handicapped.
 - (6) Select and analyze current music and literature which reflect a specific philosophical view of the individual.
 - (7) Analyze social institutions in our society which directly affect the individual.
 - (8) Brainstorm processes whereby any institution can remain dynamic rather than become static and closed.

d. Philosophy and Technological Change

- (1) Read selected books and articles concerning the impact of technology upon society.
- (2) View and critique films concerning the technological revolution.
- (3) Select historical examples of how a technological discovery directly affected and changed a philosophical position.
- (4) Discuss the relationship of technology to values.
- (5) Analyze the relationship of technology to various social institutions.
- (6) Examine the technological revolution and its implications for the disadvantaged and handicapped.

e. Philosophy and Theories of Learning.

- (1) Read selected books presenting major theories of learning (Connectionalism, Operant conditioning, sign learning, gestalt theory, psychodynamics and the like.)
- (2) Contrast major theories of learning in oral discussion sessions.
- (3) Small groups may present simulated teaching sessions representing a major learning theory while remainder of class determines what theory is represented.
- (4) Review a current research study on learning theory.
- (5) Make audio taped interviews with practice teachers concerning how students learn.
- (6) Prospective teachers may role play a major personality who visits the class and discusses his theory of learning.
- (7) Write a personal philosophy concerning theories of learning. Read selected articles and books presenting instructional technology theory.
- (8) Present individual reports concerning schools using instructional technology.
- (9) Review a funded project that developed instructional technology programs.
- (10) Learn a new concept or skill through a self-instructional program and report analysis and impression of the program to class.
- (11) Review current models of learning. Small groups will sketch their own models of learning and present to class. The prospective teacher will draw and construct a model of learning that expresses his or her theory of learning.

- (12) Write a personal philosophy of education expressing a developed theory of learning.

VI. STUDENT PERSONNEL SERVICES

A. Principles and Theories of Counseling

1. Competencies:

Upon completing the proposed curriculum, the prospective teacher will be able to:

- a. Demonstrate a knowledge of the purposes, services, and locations of national organizations concerned with the education or general welfare of exceptional individuals.
- b. Conduct group counseling sessions.
- c. Counsel students.
- d. Demonstrate an ability to counsel parents.
- e. Confer with students and parents at home and in school, regarding the student's educational development.
- f. Supply the guidance counselor with performance data about students.
- g. Communicate curriculum goals to parents.
- h. Communicate with prospective and continuing students during the summer.
- i. Use other resources in the school environment.
- j. Understand limitations of the handicapped and disadvantaged students.
- k. Demonstrate empathy and understanding for parents of the handicapped and disadvantaged students.

2. Topical Content Outline and Strategies:

a. Counseling.

- (1) As a prospective teacher become involved in a variety of counseling groups using different techniques.
- (2) Role play counseling sessions.
- (3) Observe a variety of counseling sessions.
- (4) Read selected articles and texts related to counseling theory.
- (5) Using audio and/or video tapes examine in detail the techniques used by self and others in counseling sessions.

b. Reporting student progress to students, parents and other school personnel.

- (1) Examine a wide variety of report cards used throughout the areas.
- (2) Participate in a child study team.
- (3) Role play reporting to parents.
- (4) Examine forms used by other school personnel for reporting pupil progress and/or problems.
- (5) Discuss the pros and cons of report cards with reference to current research.
- (6) Discuss other possibilities, other than report cards, for reporting to parents.

- c. Resources and services in school and community.
 - (1) Report on role and function of all school personnel.
 - (2) Visit various agencies and resources in the immediate community.
 - (3) Give oral reports on agencies and applicable services available at both state and federal levels.
 - (4) Have guest speakers report to the class on the function of their agencies.
 - (5) Prepare mock referral forms for a variety of auxiliary personnel.
 - (6) Do a survey of local resources and services which cater to the needs of disadvantaged and handicapped students.
- d. Attitude
 - (1) Do volunteer work with handicapped and disadvantaged students prior to graduation.
 - (2) Read selected articles and texts dealing with parental attitude towards their handicapped and disadvantaged children.
 - (3) Have a parent panel discussion on what they view as the important needs of their children.
 - (4) Read selected articles and texts which relate the needs and characteristics of the population.
 - (5) Develop a personal philosophy for working with handicapped and disadvantaged children.

B. Career Guidance

1. Competencies:

- Upon completing the proposed curriculum, the prospective teacher will be able to:
- a. Devise a system for maintaining occupational information and opportunity data for use by students.
 - b. Direct student presentations describing activities of the industrial education program.
 - c. Assist the student in the solution of problems related to starting and continuing on-the-job training.
 - d. Conduct termination procedures for on-the-job training for the student when conditions demand it and at the close of a training program.
 - e. Refer students to qualified personnel agencies for occupational and educational information.
 - f. Assist students in securing and in filling out applications for jobs, scholarships, educational loans or college admission.
 - g. Demonstrate efficient methods of occupational placement and post-school follow-up.

- h. State methods for encouraging students to discuss career aspirations.
 - i. Assist graduates or seniors in preparing for interviews with potential employers.
 - j. State methods for developing student-parent activities for industrial education programs.
 - k. Write letters of recommendation for students.
 - l. Provide information and resources to students on post-high school opportunities available to them.
 - m. Assist students in determining ways to best describe their saleable skills.
 - n. Acquaint prospective students and their parents with the purposes, activities and values of the student industrial education organizations.
 - o. Assist students in securing and in filling out applications for jobs, scholarships, educational loans or college admission.
 - p. Devise a system for maintaining occupational information and opportunity data for use by students.
2. Topical Content Outline and Strategies:
- a. Psychology of work and career development.
 - (1) Read selected articles concerning the psychology of work.
 - (2) Discuss the work ethic and its implications.
 - (3) Make taped audio or video interviews of people's work attitudes.
 - (4) List positive psychological values of work.
 - (5) Discuss future changes in the work ethic due to automation and cybernation.
 - (6) Examine work attitudes of minority groups.
 - (7) Examine changing cultural concepts of careers for women.
 - (8) Relate social class and career expectations.
 - (9) Discuss career expectations of the culturally disadvantaged.
 - (10) Examine the relationship of work to social status.
 - (11) Diagram a model of occupational choice.
 - b. The Nature of Career Education
 - (1) Read selected books and articles concerning career education.
 - (2) Outline present programs of career education for elementary, junior, senior and college programs.
 - (3) Diagram career education models.
 - (4) Contrast traditional school curriculums and present concepts of career education.
 - (5) Analyze social and economic change in relation to occupational attainment.

- (6) Report on current research concerning occupational choice.
 - (7) List early determinants of occupational choice.
 - (8) Brainstorm in small groups possible careers for handicapped students.
 - (9) Discuss various theories of vocational development.
 - (10) Analyze work patterns in urban areas.
 - (11) Outline federal programs related to career development.
 - (12) Examine methods for determining parental attitudes toward career programs.
 - (13) Present and critique current films dealing with career education.
 - (14) List values of assumptions of career education.
 - (15) List specific procedures for planning, organizing and controlling on-the-job training programs.
- c. Selection and Dissemination of Career Information
- (1) Develop a master list of specific sources of career information.
 - (2) Examine methods of developing a library of career information for schools.
 - (3) Examine present methods used to disseminate career information to children.
 - (4) Discuss the occupational exploration process.
 - (5) Discuss the computerization of career information.
 - (6) Examine the role of the elementary school in disseminating occupational information.
 - (7) Brainstorm innovative methods for vocational counseling.
 - (8) Examine the career counselor's role in relation to the disadvantaged and handicapped.
 - (9) Outline a model program of career counseling for handicapped children.
 - (10) List specific steps for changing career expectations of minority groups.
 - (11) Outline a continuing career guidance program for adults.
 - (12) Observe career guidance sessions with disadvantaged children.
 - (13) Develop a proposed career information center in the inner city.
 - (14) Explore methods for involving mass media in dissemination of career information.

d. Marketing and Placement of Career Skills

- (1) Read articles relating to marketing career skills.
- (2) List specific steps in marketing career skills.
- (3) List current methods of occupational placement.
- (4) Make a video tape of do's and don'ts for job interviews.
- (5) Organize, run and critique a counseling session with seniors on how to prepare an interview.
- (6) List ten major causes of failure in securing a job.
- (7) Develop a specific program entitled "When and How to Apply for a Position."
- (8) Develop a written resume' and analyze what information should be included in a "brief."
- (9) Select a disadvantaged youth or adult and help the person write a "resume'" or "brief."
- (10) Develop a self-analysis form for pin-pointing talents and capabilities before applying for a job.
- (11) In small group sessions develop a six-step guide entitled "How to Get the Exact Position You Desire."
- (12) Conduct a student-parent career counseling session.
- (13) Role-play frequent problems encountered by disadvantaged and handicapped youth when applying for a position and develop specific methods for securing employment.
- (14) Invite representatives of employment bureaus to discuss specific methods for securing employment.
- (15) Develop a list of six steps for keeping a job once it is obtained.
- (16) Organize an adult workshop concerning how to advance in a job.
- (17) Summarize existing "self-improvement" programs used in management and modify these for use with secondary students.
- (18) Explore how advisory committees can be utilized for helping students to market their skills.
- (19) Brainstorm innovative methods for motivating students to discuss their career aspirations.
- (20) Participate in an industrial education student organization.
- (21) List and analyze existing industrial education organizations.

- (22) Discuss techniques for determining reputable personnel agencies and employment bureaus.
- (23) Select a given community and diagram a model showing community agencies that students might use for securing employment.
- (24) Discuss how to write a letter of recommendation.
- (25) Select a school and for a given period of time operate a "hot line" answering any questions concerning career opportunities or work problems.

e. Developing Career Programs.

- (1) Read selected articles describing present career programs.
- (2) List successful career programs now in operation.
- (3) Compile common practices of present career programs.
- (4) List common problems in urban career programs.
- (5) Have small groups develop a model career program for the disadvantaged and handicapped.
- (6) Invite state official to describe the structure of career programs.
- (7) Analyze traditional approaches for providing career counseling for the handicapped student and suggest possible improvements.
- (8) Examine occupations for non-college youth and adults.
- (9) Brainstorm methods and techniques for establishing career education programs in all high schools.
- (10) Discuss how to plan, organize and control a career education program.
- (11) Discuss methods for determining community attitudes toward career education programs.
- (12) Develop a public relations campaign for establishing career education in a school.

C. Evaluation and Diagnostic Techniques

1. Competencies

Upon completing the proposed curriculum, the prospective teacher will be able to:

- a. Select, administer and educationally interpret the results of standardized diagnostic and achievement tests.
- b. Analyze students' cumulative records.
- c. Interpret occupational tests and inventories to students.
- d. State methods for recognizing needs and goals of individual students.
- e. Identify a prospective student on basis of selection criteria and data.

- f. Establish criteria for selection of student.
 - g. Maintain anecdotal records on students.
 - h. Determine relationships among students through sociometric techniques.
 - i. Evaluate work competencies.
 - j. Determine the reasons students drop out of the programs.
 - k. Interview students and parents to obtain student interest and aptitude information.
 - l. Recognize potential problems of students.
 - m. Arrange for the local office of the U.S. Employment Service to administer and to interpret the General Aptitude Test Battery.
 - n. Evaluate the quality of the on-the-job training received by the student.
 - o. Obtain information from parents relative to their expectations of the programs.
 - p. Examine the student's progress records to determine future on-the-job training experiences and related classroom assignments.
 - q. Administer subject matter diagnostic tests.
 - r. Analyze enrollment trends to determine student and parent acceptance of the program.
 - s. Provide parents with systematic and comprehensible evaluations of student progress.
 - t. Evaluate student's personal traits and characteristics on the job.
 - u. Administer occupational tests relative to student selection and placement.
2. Topical Content Outline and Strategies
- a. Testing
 - (1) Read text books pertaining to testing.
 - (2) Will be familiar with tests and test manuals relating to the areas of diagnosis, achievement, occupation, social relationships, etc.
 - (3) Will administer and interpret the results of a variety of tests.
 - (4) Taking the results of a diagnostic evaluation, will be able to prescribe a program best suited to the student.
 - (5) Administer and interpret a sociogram to a class of students.
 - (6) Do pre and post testing with a group of students after teaching a specific unit and determine why some students failed to learn the material.
 - (7) Interpret a diagnostic report submitted from an outside agency.

- (8) Develop a diagnostic test based upon a unit the prospective teacher has taught.
- (9) Using a student's test profile determine which occupation he is best suited for.
- b. Reporting techniques
 - (1) Keep an anecdotal record on a student whom the prospective teacher is observing.
 - (2) Keep observation reports on a student and determine that student's needs.
 - (3) Read articles on various types of observational techniques.
 - (4) Discuss the possible ways you could follow-up students after graduation, and the need for such information.
 - (5) Role play conferences with parents.
 - (6) Write up a sample report to be sent to parents on their child's progress.
 - (7) Be familiar with the cumulative record forms used in most schools.
- c. Student awareness
 - (1) Develop a list of possible areas of interest of the handicapped and disadvantaged student.
 - (2) Read articles and texts pertaining to the needs and limitations of the students.
 - (3) Observe as many students as possible in a variety of settings to become cognizant of their limitations.
 - (4) Keep observation reports on a student and determine that student's needs and limitations.
- d. Occupational awareness
 - (1) List the services offered by the U.S. Employment service.
 - (2) Administer an occupational preference scale and interpret it.
 - (3) Survey the local job market.
 - (4) List the skills needed for specific jobs.
 - (5) Establish criteria of work competencies for a specific job.
 - (6) Determine from a diagnostic evaluation report which job training area would best suit the student.
- D. Resources and Techniques for Remediation
 - 1. Competencies

Upon completing the proposed curriculum, the prospective teacher will be able to:

 - a. Work with other teachers to help students with individual problems.
 - b. Assist students with their problems by working cooperatively with agencies such as the health and welfare services.

- c. Assist parents in obtaining information from clinics, organizations and agencies.
- d. Propose specific action for resolution of learning and behavior problems.
- e. Refer students to the guidance counselor and other specialists within and outside of the school.
- f. Develop remedial techniques.
- 2. Topical Content Outline and Strategies
 - a. Remediation
 - (1) Prescribe a program to remediate learning and/or behavior problems by using a diagnostic report on a student.
 - (2) Employ a wide variety of remedial techniques.
 - (3) Do tutorial work with a child who has a specific learning problem.
 - (4) Read selected articles and texts dealing with remedial techniques.
 - b. Resources and services
 - (1) Use field trips to become aware of services and agencies in the community which may be beneficial to student.
 - (2) Have guest speakers speak on community resources.
 - (3) Role play parent conferences.
 - (4) Interview personnel both within the school and without to determine their role and function.
 - (5) Develop and complete referral forms as used by guidance counselors and other specialists within and outside the school.
 - (6) Prepare written reports to parents and other agencies.

VII. & VIII. FIELD EXPERIENCES AND STUDENT TEACHING

Field Experiences refer to all those activities, outside the classroom, which take place prior to full time student teaching. Student teaching is the culminating field experience which refers to full time responsible teaching under the supervision of a master teacher. While Field Experiences include only those individual or group activities taking place outside of the formal college classroom, the introductory and summary phases of these experiences will many times be held in the college classroom and be a major part of the planning for the total experience.

No attempt has been made to identify when in the program sequence, the field experience will occur. The general direction is from limited observation through closely controlled participation to concluding

experiences where the student has a major responsibility for instructional decision making (planning) and program implementation.

The Field Experiences are considered to be a series of aids to learning ranging from limited observation to responsible teaching. They are methods rather than content. The procedures explained below were followed in the development of the sub-categories of Field Experiences and Student Teaching.

Content and strategies included in the other sub-categories of Professional Education were examined. From this examination, the following sequence of Field Experiences was developed.

1. Observation primarily in-class within public and private educational agencies. Major purpose -- introduction to programs and children.
2. Observation in industrial or other work related environments. Major purpose -- introduction to work environments.
3. Broad community observation -- urban and suburban.
4. Limited participation in-class with public and private education agencies. Activities include serving as teachers aids and/or working with individual or small groups of children.
5. Indepth participation (practicum) in-class with public and private educational agencies -- four experiences should include:
 - A. traditional classroom - normal children.
 - B. traditional program of industrial education.
 - C. traditional special education program.
 - D. special education program with industrial education emphasis.

Within this experience (#5) will be included observation of educational service functions (administration, health, guidance, instructional media offices) and school board meetings.

6. Indepth participation with community agencies (other than schools).
7. Full-time teaching -- beginning with initial observations through various stages of participation to full responsibility as a teacher -- two experiences should include:

- A. one experience in either special education or industrial education depending upon choice of specialization.
- B. one experience in industrial education for handicapped and disadvantaged children.

A college Seminar should be incorporated in the program at the time of full-time teaching.

Each strategy, from the sub-categories of Curriculum, Methods of Teaching, Educational Psychology, Human and Intercultural Relations, Foundations, and Student Personnel Services, has been assigned to a field experience where applicable. This information is found in Table I.

TABLE I
STRATEGIES AND FIELD EXPERIENCE COMPONENTS

Strategies	Field Experiences	Strategies	Field Experiences	Strategies	Field Experiences
I. Curriculum					
*A. 2b (2).....3		F. 2c (1).....5,7		I. con't	
2b (3).....3		2c (2).....5		2d (1).....7	
2c (2).....3,6		2d (1).....5		2d (2).....7	
2c (5).....5		2d (2).....5		2d (3).....7	
		2d (3).....7		2d (4).....7	
B. 2c (1).....5		G. 2b (2).....7		2e (1).....7	
2c (2).....5,7		2c (2).....5		2e (2).....7	
2c (3).....5,7		2e (1).....4,5		2e (3).....7	
		2e (2).....4		2e (4).....7	
C. 2b (1).....2,6		H. 2b (2).....4		2f (1).....7	
2b (2).....2,6				2f (2).....7	
2b (3).....6					
		I. 2a (1).....3		II. Methods of Teaching	
D. 2a (2).....1,5		2a (2).....7		A. 2a (3).....1,4,5	
2b (3).....7		2b (2).....7		2b (3).....5	
2e (1).....7		2b (5).....7		2b (4).....5	
E. 2a (2).....1,4,5,7		2c (1).....7		2b (5).....1,5	
2c (1).....5		2c (2).....7		2b (7).....5,7	
2c (2).....7		2c (3).....7			

*A 2b(2) 3 on page 23 refers to "Have students assigned to small group to conduct a survey." This strategy is appropriately implemented in Field Experience level 3. "Broad community observation - urban and sub-urban." page 69.

Strategies	Field Experiences	Strategies	Field Experiences	Strategies	Field Experience
B. 2a (3).....1,5		D. 2a (3).....7		C. 2a (2).....3	
2b (1).....5				2b (1).....3	
2b (2).....5		III. Educational Psychology		2b (2).....3	
2b (3).....5,7					
2c (1).....5,7		A. 2b (1).....5		D. 2a (3).....3	
2c (2).....7		2b (2).....5		2b (1).....3	
2c (3).....7				2b (2).....3	
2c (4).....1,5		B. 2b (1).....5,7		2b (3).....3	
2d (5).....5,7		2b (2).....7		2b (4).....3	
2e (1).....5,7					
2e (3).....7		C. 2a (1).....4		E. 2a (4).....5	
2f (1).....7		2a (2).....5		2a (5).....3	
2f (2).....7		2a (3).....1,3		2a (7).....3,6	
2f (3).....7		2b (2).....1		2b (4).....7	
2f (4).....5,7		2b (3).....1		2b (7).....6	
C. 2a (3).....1		IV. Human & Intercultural Relations		V. Foundations	
2a (8).....5					
2a (9).....5		A. 2a (1).....3,6		A. 2a (12).....5	
2b (1).....5		2a (2).....3		2b (3).....3	
2b (2).....5		2a (3).....6		2b (5).....3	
2b (3).....1,5		2a (4).....3		2b (6).....3	
2b (4).....5,7		2a (5).....3		2b (7).....3	
2b (5).....5,7		2a (6).....3		2b (8).....5	
2b (6).....5,7		2b (1).....5		2b (9).....5	
2b (7).....5,7				2b (10).....3,6	
2c (2).....1,5		B. 2a (1).....2		2b (11).....3	
2d (1).....5		2a (3).....2		2b (12).....3	
2d (3).....1,5		2a (4).....3		2b (13).....5	
2d (5).....5		2b (1).....3,5		2b (14).....5	
2e (3).....7		2b (2).....5		2b (19).....3	
2e (4).....7		2b (4).....3		2b (22).....5	
				2d (2).....3	

Strategies	Field Experiences	Strategies	Field Experiences	Strategies	Field Experiences
B. 2b (7).....7 2c (3).....3 2c (5).....3 2c (8).....3 2c (9).....3 2c (11).....1 2c (13).....3 2c (14).....5 2c (15).....3,5,6		A. con't 2c (3).....3 2c (4).....3,6 2c (6).....3 2d (1).....4,6 B. 2a (3).....2,3 2a (6).....2,3 2a (10).....2 2c (6).....1 2c (8).....1,3,5,6 2c (12).....1,3,5,6 2d (5).....7 2d (7).....7 2d (8).....7 2d (9).....7 2d (10).....7 2d (12).....7 2d (16).....6 2d (23).....3 2d (24).....7 2e (7).....1 2e (8).....2		C. con't 2a (8).....7 2a (9).....7 2b (1).....1,7 2b (2).....7 2b (7).....5,7 2c (3).....1 2c (4).....7 2d (2).....7 2d (3).....2,3 2d (4).....2 2d (5).....2 2d (6).....7 D. 2a (1).....7 2a (3).....4 2b (1).....3 2b (2).....3 2b (4).....3,5 2b (5).....5,7 2b (6).....7	
C. 2a (9).....3 2b (8).....6 2b (10).....1,4,5,7 2c (7).....3 2d (5).....3 2e (5).....5,7 2e (8).....7 2e (9).....1		C. 2a (3).....7 2a (4).....7 2a (5).....5,7 2a (6).....5,7 2a (7).....7			
VI. Student Personnel Services					
A. 2a (1).....4,5,7 2a (3).....1,5,7 2a (5).....1,4,5,7 2b (1).....5,7 2b (2).....4,7 2b (3).....5,7 2b (4).....5,7 2c (1).....5 2c (2).....3					

Major Fields of Specialization

In order to meet the certification requirements for both industrial education and special education, the prospective teacher will need to achieve the competencies prescribed for either industrial arts or vocational education and the competencies for exceptional children. Again, no attempt has been made to identify specific courses but rather to enumerate several broadly stated competencies with suggested strategies for their achievement. This approach permits a particular institution to develop its own teacher training program to achieve the necessary competencies.

Currently, a number of states, including New Jersey, have task forces developing specific competencies for the various fields of specialization. As these competencies are finalized and adopted they should be used as the basis for curriculum development in the various fields of specialization.

I. INDUSTRIAL ARTS

A. Competencies:

1. The prospective teacher will be able to teach a general industrial arts course offering instruction in the main divisions of industrial arts subject matter.
2. The prospective teacher will be able to teach a general unit-type laboratory or shop in one of the main divisions of industrial arts subject matter.
3. The prospective teacher will be able to interpret and apply the philosophy, principles, and methods of industrial arts in elementary, secondary, adult and collegiate schools.
4. The prospective teacher will possess a fundamental knowledge of the historical development of technology and its impact on man and society.
5. The prospective teacher will possess technical competencies in the fields of drafting, electricity-electronics, graphic arts, manufacturing and construction industries, and power and transportation.
6. The prospective teacher will be able to understand industrial problems and to make independent investigations of the origins and evolution of present industrial conditions.
7. The prospective teacher will be able to design, construct and test individual projects.

B. Strategies:

The central theme of a curriculum model in the field of specialization (Industrial Arts) is the development of technical competence. Described below are two procedures

which might be used to provide the prospective teacher with these technical competencies.

1. The prospective teacher will successfully complete a required program of study in the fields of drafting, electricity-electronics, graphic arts, manufacturing and construction industries, and power and transportation. This round-robin approach should come early in the four-year baccalaureate program and should include the minimum technical competencies needed to teach each of the fields at the middle school or junior high school level. This is predicated on the assumption that the prospective teacher may not take any further course work in a particular technical field.

The second phase of this model would require the prospective teacher to select one or more of the technical fields for advanced specialization. This advanced specialization should be of such depth that technical competency is achieved which would adequately prepare him to teach advanced courses in the particular technical field.

2. This model would consist of three levels of technical specialization. Level One would be based on the development of a comprehensive list of minimum technical competencies covering the broad field of specialization. Once this list of minimum competencies is developed, a course of sequence of experiences would be developed that covered the complete list. Each prospective teacher should be required to pass a proficiency test on each competency before he is eligible to move to Level Two.

Level Two would consist of a comprehensive course in each of the broad categories of manufacturing, construction, communications and power. These courses would be predicated on the competency level developed in Level One and would be of sufficient breadth and depth to provide the prospective teacher with the level of technical competence and understanding needed to teach any one of the areas at the junior high level.

Level Three would provide the prospective teacher the opportunity to select from among several options tailored to meet his personal career objectives. This level would consist of a wide variety of specialized offerings. If the prospective teacher desired to remain a "generalist," highly competent to work at the inter-

mediate level of the school system, he would 'opt' a sequence of courses which would provide additional technical competency in each of the four broad categories. On the other hand, if the prospective teacher desired a career at the senior high or technical school level, he would select a sequence of courses which would encompass all aspects of one of the technical specialization. Level Three should be considered a capstone experience in the prospective teacher's specialization training.

3. The technical competency described in either of the above procedures should be acquired in unison with the professional competencies described in the preceding section. When meshed appropriately, the technical and professional competencies will reinforce each other and provide the prospective teacher with the expertise requisite to success in teaching.

The one competency which may need to be examined separately is the competency dealing with a fundamental knowledge of the historical development of technology. A course to achieve this competency could be provided in the History and Social Sciences area of the General Education component of this model. It could also be offered within the Specialization area and would be a good introduction to technology for the prospective teacher.

II. VOCATIONAL EDUCATION

A. Competencies:

Rather than list all the competencies required for each occupation, the one broad competency will be:

The prospective teacher will be able to perform all the tasks which would be expected of a journeyman (or similar level of competency) in the occupational area he intends to teach.

B. Strategies:

1. Prior to being admitted into the program, the prospective teacher will have had occupational experience in such amounts and experiences so as to be capable of performing such duties as are indicated above. Wherever possible, this will be determined through occupational competency examinations in conjunction with a screening committee of other journeymen and supervisors in his field.

2. a. If the prospective teacher has not, upon admission to the program, had this amount and scope of experiences, he should be placed in a cooperative college-industry program until such time that he can demonstrate mastery of these tasks.
- b. If it is determined that the prospective teacher is lacking certain areas of related information, then these areas should be reinforced through the addition of college level courses into his degree requirements. This determination should be left to the discretion of the screening committee and college advisor.

III. EXCEPTIONAL CHILDREN

A. Competencies:

1. The prospective teacher will understand the types of natures of exceptionalities among children and youth and their educational relevance.
2. The prospective teacher will possess competency in individual and group classroom management procedures appropriate to exceptional children.
3. The prospective teacher will demonstrate use of diagnostic procedures to identify the learning difficulties of the exceptional child.
4. The prospective teacher will have the ability to develop and implement prescriptive programs based on diagnostic findings.
5. The prospective teacher will possess knowledge of techniques utilized in behavioral control.
6. The prospective teacher will possess social skills and attitudes to work effectively with other school personnel in coordinated programs for exceptional children.
7. The prospective teacher will have the ability to interpret the educational program to parents, teachers, administrators and community groups.
8. The prospective teacher will have ample opportunities to observe institutions and facilities concerned with the education, health, and welfare of all types of exceptional children.
9. The prospective teacher will have supervised laboratory experiences with exceptional children as one means of determining the candidate's maturity for work with exceptional children.
10. The prospective teacher will be encouraged to affiliate with appropriate professional groups, and create an awareness of the referral agencies available for aid to exceptional children.

11. The prospective teacher will develop competence in planning and conducting wide varieties of learning experiences for individuals and groups.

B. Strategies:

Through a series of instructional activities including observation, demonstration and participation of normal and exceptional children, prospective teachers should begin at a general introductory level to provide opportunities for exposure to various types of handicapped children of different ages in a variety of settings. Observational sites should be included concurrently with enrollment in appropriate theoretical courses. These courses should include basic curricula content, measurement and evaluation, management techniques, resources and services for learning and behavioral difficulties. As specialization becomes more intensive in the later stages of the baccalaureate, the core of the program should include experiences in curriculum development, diagnosis, practicum and student teaching through which the expected competencies will be attained.

CHAPTER VI

RECOMMENDATIONS AND SUGGESTIONS FOR IMPLEMENTATION

With the need for industrial education teachers to teach handicapped and disadvantaged youth at the secondary level firmly established and with this curriculum model for the development of teacher training programs now available, it becomes incumbent upon teacher educators to take the initiative to create appropriate pre-service programs.

There is no one best way to approach the development of an appropriate pre-service program. Each institution must utilize its resources in its own unique way. Prevailing conditions including the nature of presently existing programs in one or more of the areas of specialization under consideration will have a bearing upon strategies used. The suggestions enumerated in subsequent pages are offered as possible approaches and should not be considered to be in any rank order or to possess any mystical characteristics.

Three categories to be included in a curriculum are General Education, Professional Education and Specialization which could include either industrial arts, vocational education or both, and special education. The category of General Education is ordinarily well developed in teacher education programs and will require modification only to insure that experiences which are unique for this new specialist be included. The model suggests areas of study through which the necessary general education competencies can be attained. Each area of specialization presents its own unique problems. For those who would consider performance based criteria for the development of their area of specialization, considerable assistance through resource materials should be available in the very near future. Many states are presently enumerating, analyzing and finalizing competencies considered essential for the beginning teacher in many areas of specialization. As these lists become available and are adopted by institutions, they can serve as the base from which the curriculum is developed.

One approach for an institution to consider which has programs existing independently of one another, for example special education and industrial arts education, could be as follows: Utilize the competencies suggested in this report in the Professional Education, General Education and Specialization categories and analyze the outcomes of existing courses in terms of competency attainment. The content outline and strategies suggested in this proposed curriculum model should provide ease in analyzing courses. The strategies that are presented will insure that the content is included and should permit the attainment of all associated competencies. Additional strategies should be considered on the basis of local resources available. In some

cases not all strategies should be used since a variety of approaches are indicated to accomplish a particular outcome. After careful analysis, those competencies which are not provided for in existing courses should be enumerated and may be accounted for in several ways. For example, present courses might be modified by substituting essential material for content and practices no longer appropriate. In some cases new courses may need to be developed and possibly others eliminated. Many innovations should be considered such as mini-courses, internships, individualized instruction and maximum utilization of instructional technology. Internships could be arranged by contract to provide in-depth study in specific areas, industrial observations, and industrial work experience. Where possible industrial experience should be attained where the handicapped are employed. Internships could be contracted for during interim, summer and regular sessions. Individualized instruction could include programmed instruction, micro-teaching, learning centers, and computer assisted instruction. Field Experiences will no doubt need to be altered to provide exposure in each area where certification will be granted. Existing specialized programs such as Sheltered Workshops, Work Experience, Introductions to Vocations, Employment Orientation, Cooperative Industrial Experience, as well as modified programs in vocational schools, industrial arts in secondary schools and specialized schools for the handicapped and disadvantaged, should be considered for providing these experiences. Whenever possible an inter-disciplinary approach should be used for field experiences, student teaching, and professional courses related to curriculum, methods and foundations. Consideration should also be given to the possibility of credit by examination to permit those with adequate background in various areas to test proficiency.

To develop a new dual purpose program where one area of specialization presently exists, courses for the new area should be developed and integrated with the existing specialization as described above. If the existing program is in special education, the precautions which follow should be considered.

In cases where neither program presently exists or where those existing are not appropriate a comprehensive curriculum development plan must be initiated. This will require a feasibility study to determine the extent to which a dual certification program could be successfully implemented. The expense of establishing a comprehensive program in industrial education may be prohibitive. Therefore, it may be necessary to consider alternatives in terms of the physical plant requirement. Arrangement for the use of facilities at a nearby community college, a vocational technical school or suitable public or private school may be considered. The development of a new dual purpose program could permit the use of many innovations where freedom exists from the shackles of tradition, established policy, and restraints from existing physical conditions.

In every case an organized approach through a systems analysis procedure should be adopted for the development and integration of areas of specialization in a new curriculum. The procedure should make possible valuable input from educators, parents, students, community leaders and organizations, advisory groups, and business and industry. Also inherent in the development of any program must be the provision for evaluation and modification of the programs to insure the attainment of objectives which are realistic educationally as well as geographically.

- Ellis, John; Carman, John M.; and Cayer, David. The Second Half Century: A Plan for Vocational Rehabilitation to 1975 and Beyond. Official Report of the Governor's Advisory Committee, New Jersey Comprehensive Statewide Planning Project for Vocational Rehabilitation Services. Trenton, New Jersey: New Jersey Rehabilitation Commission, 1968.
- Freels, Mervyn D. "Teaching the Industrial Arts to the Educable Mentally Handicapped." Unpublished M.A. thesis, Northeast Missouri State Teachers College, 1967.
- Goldstein, Herbert. "Issues in the Education of the Mentally Retarded." Problems and Issues in the Education of Exceptional Children. Edited by Reginald L. Jones. Boston, Massachusetts: Houghton Mifflin, 1971.
- Haug, Eugene F. and Rifkin L. "Organizing Shop Programs for the Handicapped." American Vocational Journal, XXXV (April, 1970), 37-40.
- Heggen, J.R. "Industrial Arts Teachers for Disadvantaged Youth." Industrial Arts for Disadvantaged Youth. Nineteenth Yearbook of the American Council on Industrial Arts Education. Edited by Ralph O. Gallington. Bloomington, Indiana: McKnight and McKnight, 1970.
- Hewitt, Frank M. "A Hierarchy of Competencies for Teachers of Emotionally Handicapped Children." Exceptional Children XXXIII (September, 1966), 7-11.
- Johnson, Raymond. "The Preparation of Educational Manpower." Developing Innovative Vocational and Technical Teacher Education Programs. Final Report of an Upper Midwest Vocational Teacher Educators Conference, May 13-15, 1968, at Minneapolis, Minnesota. Minneapolis, Minnesota: Minnesota Research Coordination Unit in Occupational Education.
- Jones, Ronald E. "About Face in Special Education." Education Canada, XI (December, 1971), 14-18.
- Kagy, Frederick D. "The Needs of Disadvantaged Youth: Implications for Industrial Arts." Where the Action Is. Selected Addresses and Proceedings of the American Industrial Arts Association's Thirty-first Annual Convention at Las Vegas, Nevada. Washington, D.C.: The American Industrial Arts Association, August, 1969.

SELECTED BIBLIOGRAPHY

- Arnold, Daniel S. Seminar for Supervisors and Teacher Educators of Persons with Special Needs. Final Report (Phase One), February, 1968. Lexington, Kentucky: University of Kentucky, 1968.
- Bartsch, Paul A. "Determining the Need for EMR Industrial Arts Shop Experience." Unpublished M.A. thesis, California State College, Los Angeles, 1971.
- Brennan, Thomas J. "The Slow Learner in Industrial Arts." New Concepts in Industrial Arts. Selected Addresses and Proceedings of the American Industrial Arts Association's Thirtieth Annual Convention at Minneapolis, Minnesota. Washington, D.C.: The American Industrial Arts Association, November, 1968.
- Brolin, Donn and Thomas, Barbara. Preparing Teachers of Secondary Level Educable Mentally Retarded. Project Report Number One, April, 1971. Menomonie, Wisconsin: Stout State University (University of Wisconsin-Stout), 1971.
- Buffer, James J. "Instructional Practices for the Mentally Retarded." Man/Society/Technology, XXXI (December, 1971), 82-87.
- Cotrell, Calvin J. and others. Teaching Career Analysis. Prepared for the Fourth Annual National Vocational-Technical Teacher Education Seminar in St. Louis, Missouri, November 1-4, 1970. Columbus, Ohio: The Ohio State University, The Center for Vocational and Technical Education, October, 1970.
- Daniel, Fred K. "Performance-Based Teacher Certification: What Is It and Why Do We Need It?" Performance Based Certification of School Personnel. Edited by Joel L. Burdin and Margaret Reagan. Washington- D.C.: Association of Teacher Educators, 1971.
- Dinger, Jack C. "Needs of the Secondary Educable Mentally Retarded Pupil and Competencies Required of the Teacher." Preparing Teachers of Secondary Level Educable Mentally Retarded. Donn Brolin and Barbara Thomas. Menomonie, Wisconsin: Stout State University (University of Wisconsin-Stout), 1971.
- "Education of the Handicapped." American Education, III (July-August, 1967), 30-31.

Kemp, Barbara H. The Youth We Haven't Served. Catalog Number FS 5.280: 80038. Washington, D.C.: United States Government Printing Office, 1966.

Kokaska, Charles J. "The Need for Economic Security for the Mentally Retarded." Preparing Teachers of Secondary Level Educable Mentally Retarded. Donn Brolin and Barbara Thomas. Menomonie, Wisconsin: Stout State University (University of Wisconsin-Stout), 1971.

Kruppa, J. Russell. "1972 Survey of 160 Colleges and Universities with Industrial Education Curricula." In the files of Dr. J. Russell Kruppa at Trenton State College, Trenton, New Jersey.

Martin, Edwin W. "A New Outlook for Education of Handicapped Children." American Education, VI (April, 1970), 7-10.

Mauchline, Daniel D. "Sheltered Workshops and Industrial Arts." New Concepts in Industrial Arts. Selected Addresses and Proceedings of the American Industrial Arts Association's Thirtieth Annual Convention at Minneapolis, Minnesota. Washington, D.C.: The American Industrial Arts Association, November, 1968.

Meeting at Caldwell, New Jersey. Participants: Drs. J. R. Kruppa, R. Thrower; Messrs. S. Hritz, B. Schwartz (Director of Special Education Services, West Essex Area Schools, Caldwell, New Jersey); Misses S. Rapp, M.L. Mosher, March 3, 1972.

Meeting at Katzenbach School for the Deaf, Trenton, New Jersey. Participants: Drs. J.R. Kruppa, R. Thrower; Messrs. S. Hritz, H. Wyks (Principal of the Vocational School); Misses S. Rapp, M. L. Mosher. February 17, 1972.

Meeting at Mays Landing, New Jersey. Participants: Dr. J.R. Kruppa; Messrs. S. Hritz, E. Baruffi (Child Study Supervisor of Atlantic County), R. King (Principal of the Atlantic County Vocational School), P. Mozenter (Acting Director of Vocational Services for the Disadvantaged); A. Newman (Principal of Oakcrest High School), F. Bates and G. Compton (Department Chairmen of Industrial Arts at Oakcrest High School), guidance personnel, special education teachers, industrial arts teachers; Misses S. Rapp, M.L. Mosher. February 18, 1972.

Meeting at Trenton State College, Trenton, New Jersey. Participants: Drs. J.R. Kruppa, D. McColl, R. Thrower; Messrs. S. Hritz, P. Mozenter (Acting State Director of Vocational Services for the Disadvantaged), J. Smith (State Director of Industrial Arts Education), A. Newman (Principal of Oakcrest High School), J. Mangan (Child Study Supervisor of Bergen County), A. Sheehy (Child Study Supervisor of Middlesex County), D. Dougherty (Child Study Supervisor of Camden County), D. Garwood (State Director of Vocational Education for the Handicapped), W. Egbert; Misses S. Rapp, M.L. Mosher. January 18, 1972.

Melby, Ann and Regal, Jacob. Private Interview at Trenton State College. Trenton, New Jersey. April 13, 1972.

Mozenter, Paul. Letter to Dr. J. Russell Kruppa, February 23, 1972. In the files of Dr. J. Russell Kruppa at Trenton State College. Trenton, New Jersey.

National Association of State Directors of Teacher Education and Certification assisted by the United States Office of Education. Standards for State Approval of Teacher Education. 4th ed. Salt Lake City, Utah: The National Association of State Directors of Teacher Education and Certification, 1971.

Nelson, Hilding E. "Slow Learners: A Challenge for Industrial Arts Education." American Vocational Journal, XXXIX (October, 1964). 30-31.

Performance Evaluation Project. "Interim Task Force Reports." New Brunswick, New Jersey, February, 1971. (Mimeographed).

Raybourn, James W. "Industrial Arts for Educable Mentally Retarded Students." Journal of Secondary Education, XXXV (January, 1970), 24-26.

Ressler, Ralph. "Making Room for the Disadvantaged in Industrial Arts." Industrial Arts and Vocational Education, LX (November, 1971), 24-26.

"Retarded Get Right to Schools." Philadelphia Inquirer, May 6, 1972.

Ross, Herbert J. "Guidelines for Serving Youth with Special Needs in Vocational Education." Unpublished ED.D dissertation, Temple University, 1970.

Rules and Regulations Pursuant to Title 18A, Chapter 46 New Jersey Statutes (June 24, 1970) Title 8, Chapter 28 New Jersey Administrative Code. Trenton, New Jersey: Department of Education, Division of Curriculum and Instruction, June, 1970.

- Schmitt, Henry E. and Woodin Ralph S. "Strategies for Preparing Teachers to Reach and Teach the Disadvantaged." American Vocational Journal, XXXV (November, 1970). 24-25, 81.
- Schmitt, Marshall L. "Improving Industrial Arts Teaching." Conference Report, June, 1960, OE-33022. Washington, D.C.: United States Government Printing Office, 1962.
- Schwartz, Louis. "An Integrated Teacher Education Program for Special Education-A New Approach." Exceptional Children, XXXIII (February, 1967), 411-416.
- Scott, Vera O. "An Exploratory Study to Identify the Teaching Behaviors That Are Used Most Frequently and Are Most Crucial in Teaching Culturally Disadvantaged Children." Unpublished Ph.D. dissertation, Michigan State University, 1967.
- Sharkey, Frank E. and Porter, C.B. "Industrial Arts for the Mental Retardate." American Vocational Journal, XXXIX (May, 1964), 22-23.
- Sheperd, George. "What Research on the Mental Retardate Has to Say." Journal of Secondary Education, XLI (December, 1966), 339-342.
- Siegal, Herbert and Haug Eugene. "Skill Development for the Handicapped." Industrial Arts and Vocational Education, LIX (September, 1970), 24,26.
- Smith, Robert M. "Preparing Competent Special Education Teachers." Education Canada, IX (December, 1969), 31-36.
- Smith, William L. "Ending the Isolation of the Handicapped." American Education, VII (November, 1971), 29-33.
- Sparks, Howard L. and Younie, William J. "Adult Adjustment of the Mentally Retarded: Implications for Teacher Education." Exceptional Children, XXXVI (September, 1969), 13-15.
- Supplement to Standards for State Approval of Teacher Education. Trenton, New Jersey, Department of Education, Office of Teacher Education and Certification, March, 1971.
- Tisdall, William J. "Industrial Education and the Mentally Retarded." The Education Digest, XXIX (May, 1964), 42-44.

Viggiani, James C. "Industrial Arts for Exceptional Children." School Shop, XXIV (March, 1965), 21,42.

Wilson, Herman Cecil. "Industrial Arts for the Special Education Student." Man-Society-Technology. Representative Addresses and Proceedings of the American Industrial Arts Association's Thirty-second Annual Convention at Louisville, Kentucky. Washington, D.C.: The American Industrial Arts Association, August, 1970.

"Work Experience and Career Exploration Program." Pamphlet published by the United States Bureau of Labor Standards, Washington, D.C., no date.

Wyllie, John R. "Sequence of Vocational and Occupational Training Programs for Handicapped Students." Trenton, New Jersey: Department of Education, Division of Vocational Education, no date. Pamphlet.

Younie, William J. "Increasing Cooperation between School Programs for the Retarded and Vocational Rehabilitation Services: An Experimental Teaching Approach." Mental Retardation, IV (June, 1966), 9-14.

APPENDIX A

QUESTIONNAIRE AND STATISTICAL ANALYSIS



State of New Jersey
TRENTON STATE COLLEGE
TRENTON, N. J. 08625

January 15, 1972

Dear Professor:

We at Trenton State College recognize the need for preparing Industrial Education teachers with technical competence and training in the area of Special Education in order that some of our future graduates will be capable of working with disadvantaged and handicapped children. Our interest is in providing a program option in Industrial Education with training being directed toward preparation of teachers for working at the junior-senior high school level. In many cases these graduates will be working in programs of industrial arts, work study, etc.

We believe that some institutions which offer pre-service and/or graduate programs in industrial arts and vocational education must now have similar programs which provide certification in both Industrial Education and Special Education. In our attempt to develop this new program we desire to avoid the pitfalls which may occur in such an undertaking and are, therefore, calling upon the profession for assistance.

I would appreciate it if you or your designated colleague will complete the enclosed questionnaire and return it to me at the earliest opportunity. In addition, if you offer a similar program at either the undergraduate or graduate level, I would appreciate receiving a copy of your descriptive materials and any comments you feel might be helpful to us.

Thank you kindly for your professional assistance.

Sincerely,

A handwritten signature in cursive script that reads "J. Russell Kruppa".

J. Russell Kruppa
Professor and Coordinator
of Industrial Arts

JRK:baa
Enc.

Please complete this questionnaire by checking the appropriate responses and completing other requested information, and return in the enclosed self-addressed envelope.

Thank you for your cooperation,

J. Russell Kruppa
Professor and Coordinator of I.A.

-
1. Does your institution offer pre-service or in-service programs in Industrial Arts or Vocational Education which prepare graduates for teaching handicapped and disadvantaged youth?

7* (11) Yes (10) No

If your answer is No, there is no need to proceed further; however, please return the questionnaire.

2. At what level is your program offered?

5* (11) Undergraduate (5) Graduate () Both

3. In what area/s does your program provide certification?

4* (10) Industrial Arts 3* (8) Voc. Ind. Education

2* (11) Special Education 2* (4) Other -- please
describe below

-
4. How many total semester or quarter hours of preparation are required for graduation?

(120-142) Sem. Hours (60-210) Quarter Hours

5. How many semester hours (S.H.) or quarter hours (Q.H.) of credit are required in the following areas:

(25-50) S.H.

TECHNICAL

(45-72) Q.H.

(9-30) S.H. PROFESSIONAL

(EXCLUDING STUDENT
TEACHING)

(17-30) Q.H.

* Indicates questionable responses.

SPECIAL EDUC.

- (3-26) (Background for
working with
(10-36) Handicapped &
Disadvantaged)

(5-15) S.H.

STUDENT TEACHING

(15-16) Q.H.

6. Where are student teaching experiences provided?

2* (3) Social Agencies

6* (11) Public Schools

4* (4) Sheltered Workshops

() Other -- please
describe below

7. Do you have a separate Department, Division, or School for Special Education at your college or university?

5* (8) Yes

1* (4) No

8. What departments or curriculum areas cooperate to provide your program?

7* (7) Industrial Arts

2* (5) Voc. Ind. Education

6* (8) Special Education

() Other -- please
describe below

9. Are your students required to obtain work experience in industry as a part of requirements for graduation?

1* (3) Yes

5* (10) No

If "yes," describe briefly the type of experience, time requirements and credit load attached.

10. Please list the name/s of personnel at your institution who are most knowledgeable about program development in this area. Also check (if possible) the status of these people regarding their willingness to meet at the AIAA convention in Dallas to further discuss your special program.

NAME & TITLECAN MEET IN DALLAS

	() Interested	() Not interested
_____	()	" "
_____	()	" "
_____	()	" "

EXPLANATION OF ASTERISK

- * - The presence of an asterisk next to a number indicates that these responses were in some way questionable. The most common reason for the uncertainty as to the classification of responses was contradiction either by other responses which followed or by attached statements which indicated a misunderstanding of the original question. It was felt that these responses should be included in the analysis of the survey and are therefore designated by the use of the asterisk.

APPENDIX B

DIRECTIONS FOR DEVELOPING LEARNING EXPERIENCES

I. GOAL

The central purpose of this project is to develop a curriculum model designed to prepare teachers of Industrial Education with the special expertise to teach handicapped and disadvantaged children. This is to be a baccalaureate program resulting in certification in both the fields of Industrial Education and Special Education.

II. MAJOR AREAS OF THE PROPOSED CURRICULUM MODEL

The Standard for State Approval of Teacher Education of the National Association of State Directors of Teacher Education and Certification and the Supplement to these Standards issued by the Office of Teacher Education and Certification of the New Jersey Department of Education divide the baccalaureate curriculum into the three major categories of General Education, Professional Education, and Major Field of Specialization. Each of these three categories is to be dealt with separately.

GENERAL EDUCATION

The category of general education provides the area of greatest latitude. General education must include studies in at least four of the following areas: English, mathematics, science, social studies, fine and practical arts, foreign languages, music, philosophy and psychology. This category will be developed in terms of those academic areas most suitable to the development of a teacher of industrial education to teach the disadvantaged and handicapped.

PROFESSIONAL EDUCATION

The second category, that of professional education, includes the areas of: methods of teaching, educational psychology, field experiences, human and intercultural relations, curriculum, foundations of education, student personnel services and student teaching. The attached lists of competencies which have been assembled and refined by subjection to a professional jury apply to the broad category of professional education. These competencies have been identified with each sub-category of professional education. Learning experiences will be developed to attain these competencies within each sub-category.

MAJOR FIELD OF SPECIALIZATION

The third and final category is that of the field of specialization. The competencies of this category are quite complex in nature. Currently, there are in New Jersey and other states state-wide task forces working on the development of competencies applicable to these areas--Industrial Arts, Special Education and Vocational Education. In the interim, a suggested approach will be developed in accordance with the NASDTEC Standards.

III. DEVELOPMENT OF LEARNING EXPERIENCES

The next phase in the project development is to:

1. Standardize the written format for each competency.

- A. All competencies must be written in general behavioral terms using the following format: UPON COMPLETING THE PROPOSED CURRICULUM, THE PROSPECTIVE TEACHER WILL BE ABLE TO...

Example:

"Administer diagnostic tests."

- B. Provide continuity in recording competencies by following these guidelines.

1. Children or pupils must always be referred to as students.
2. Adjectives describing secondary school children must be referred to as "handicapped and disadvantaged" students.
3. College students must always be referred to as prospective teachers.
4. The generic term Industrial Education must be used rather than the words Industrial Arts or Vocational Education.
5. Where appropriate, courses and/or programs must be referred to as Industrial Education for handicapped and disadvantaged...
6. Because the program is designed for use in industrial education for handicapped and disadvantaged students, redundancy should be eliminated in making reference to these.

Example: Establish procedures for attending to first aid needs of industrial education students.

- C. Repetitious content in competencies on the attached lists should be eliminated.

2. Encourage the development of new competencies. However, these must be identified by using an asterisk (*) preceding their listing.
3. Identify, by title, the major divisions of content area within each sub-category, cluster competencies under these, and identify content outlines and strategies.
 - A. List competencies which logically cluster under each title. (All competencies must be used.)
 - B. List in topical outline form, to the first order, the suggested content to achieve the competencies in 3A above.
 - C. Describe the strategies for implementing the content in 3B above.
 - D. See attached format for reporting your information.
4. Assign consultants to specific assignments as listed below. These are arranged as paired assignments for each sub-category within the Professional Education category and the General Education and Major Field of Specialization categories. The prefixed code letters identify each sub-category with the competencies to be considered from the lists of competencies you will receive.

GENERAL EDUCATION:

Project Staff

PROFESSIONAL EDUCATION:

- | | | |
|--------------------------------|---|--------|
| A. Methods of Teaching |) | Team 1 |
| B. Curriculum |) | |
| C. Field Experiences |) | Team 2 |
| D. Student Teaching |) | |
| E. Educational Psychology |) | Team 3 |
| F. Human & Intercultural Rel.) | | |
| G. Foundations of Education |) | Team 4 |
| H. Student Personnel Services) | | |

MAJOR FIELD OF SPECIALIZATION:

Project Staff &
one consultant

5. Prepare materials consistent with the NASDTEC Standards and the New Jersey Supplement. The attached excerpts from the New Jersey Supplement to the NASDTEC Standards

further define the scope of each of the eight sub-categories of Professional Education and the category of General Education.

Also attached are the excerpts describing the category of Major Areas of Specialization. These will be helpful in assuring consistency with the recommendations in both the NASDTEC Standards and the New Jersey Supplement (1971) to these standards.

EXCERPTS FROM NASDTEC STANDARDS AND THE NEW JERSEY SUPPLEMENT

GENERAL EDUCATION

Except where indicated otherwise below, approved programs will include a minimum of forty-five semester-hour credits of college study in general education areas such as the following, including study in at least four areas: English, mathematics, science, social studies (anthropology, economics, geography, history, political science, sociology), fine and practical arts, foreign languages, music, philosophy, psychology.

Recommendations and guidelines of the appropriate national academic and professional groups should be given due consideration in developing college programs in general education.

PROFESSIONAL EDUCATION

Methods of Teaching

Studies designed to develop understanding of the aims and techniques of instruction, including courses such as the following: general methods, methods of teaching elementary, secondary, vocational-technical subjects, or handicapped children, visual aids in education, and individualizing instruction. Programs for the preparation of elementary teachers must include study of the teaching of each of the following curriculum areas: (1) creative arts, such as fine arts, industrial arts, crafts, music; (2) health, safety, and physical education; (3) language arts, including reading; (4) mathematics; (5) science; (6) social studies.

Educational Psychology

Studies designed to develop understanding of human development and learning, including courses such as the following: psychology of learning, human growth and development, child psychology, adolescent psychology, psychology of the handicapped, psychological foundations of education, educational measurements and mental hygiene.

Field Experiences

Pre-student teaching field experiences and studies in working with inner-city, suburban, cultural children, youth and adults in a variety of community and school programs, including activities such as tutoring, small group leadership, community agency participation and individual case studies.

Human and Intercultural Relations

Studies designed to develop understanding of social interaction and cultural change, including courses such as the following: Urban sociology, history of minority groups, intergroup relations, and suburban and inner-city problems.

Curriculum

Studies designed to develop understanding of curriculum design and construction, including courses such as the following: principles of curriculum construction, the elementary, secondary, special education, or vocational-technical curriculum, a study of the curriculum in a specific subject or field of teaching, and extra-curricular activities.

Foundations of Education

Studies designed to develop understanding of the educational implications of social, political, historical, cultural and philosophical context in which schools are conducted, including courses such as the following: history of education, philosophy of education, social foundations of education, comparative education, and educational sociology.

Student Personnel Services

Studies designed to develop understanding of the student personnel and special services program of the school, including courses such as the following: student personnel problems, principles of guidance, tests and measurements, educational, vocational, psychological, and health counseling, school psychology, school social work, educating the handicapped.

Student Teaching

One hundred and fifty clock hours of approved student teaching. At least ninety clock hours must be devoted to responsible classroom teaching; sixty clock hours may be employed in observation and participation. This requirement is in addition to the fifteen credits in professional education in the above.

MAJOR FIELDS OF SPECIALIZATION

Exceptional Children

STANDARD I. The program shall provide an understanding of the types of natures of exceptionalities among children and youth and their educational relevance.

STANDARD II. The program shall provide competency in individual and group classroom management procedures appropriate to exceptional children such as:

- A. use of diagnostic procedures to identify the learning difficulties of the exceptional child.
- B. the ability to develop and implement prescriptive programs based on diagnostic findings.
- C. knowledge of techniques utilized in behavioral control.

STANDARD III. The program shall develop social skills and attitudes to enable the prospective teacher to work effectively with other school personnel in coordinated programs for exceptional children.

STANDARD IV. The program shall develop the ability to interpret the educational program to parents, teachers, administrators and community groups.

STANDARD V. The program shall provide opportunities to observe institutions and facilities concerned with the education, health, and welfare of all types of exceptional children.

STANDARD VI. The program shall provide early opportunities for supervised laboratory experiences with exceptional children as one means of determining the candidate's maturity for work with exceptional children.

STANDARD VII. The program shall encourage student affiliation with appropriate professional groups, and create an awareness of the referral agencies available for aid to exceptional children.

STANDARD VIII. The program shall provide for developing in the prospective teacher competence in planning and conducting wide varieties of learning experiences for individuals and groups.

Industrial Arts

STANDARD I. The program shall prepare students to: (a) teach a general industrial arts course offering instruction in the main divisions of industrial arts subject matter, and (b) to teach a general unit-type laboratory or shop in one of the main divisions of industrial arts subject matter.

STANDARD II. The program shall provide for the study of the philosophy, principles, and methods of industrial arts in elementary, secondary, adult, and collegiate schools.

STANDARD III. The program shall provide a fundamental knowledge of the historical development of technology and its impact on man and society.

STANDARD IV. The program shall insure technical competencies in the following:

- A. Drafting: learning activities concerned with communicating ideas or illustrations graphically.
- B. Electricity-electronics: study of technology involved in the industrial uses of electrical energy including the theory, applications, and control of electrical energy.
- C. Graphic arts: learning experiences concerned with the tools, materials, and processes used in the printing industries (study of the technical aspects of printing, related occupations, management problems, and the consumer-printing industry relationships).
- D. Manufacturing and construction industries: studies of the technological achievements concerned with methods and processes used in manufacturing articles for mass consumption. These studies shall be concerned with the industry, technology, and products derived from such materials and processes as ceramics, crafts, metals, plastics, textiles, and woods.
- E. Power and transportation: study of the technology involved in harnessing and controlling power, including its source, generation, and transmission, and the use of powered devices and vehicles.

STANDARD V. The program shall provide for the study of industrial problems, including provisions to make independent investigations of the origins and evolution of present industrial conditions.

STANDARD VI. The program shall provide opportunities to design, construct, and test individual projects.

Vocational Education

STANDARD I. Due to the nature of this program, admission to the instruction and to the program of teacher education are simultaneous and will have common requirements. Competency in the appropriate occupational field is frequently a prerequisite for admission into an occupational education program. When the student is admitted to the occupational education program without appropriate occupational training and/or work experience, the institution must arrange such vocational training and/or supervised work experience as part of the program.

STANDARD II. The general education requirements shall be based on studies which include the humanities, mathematics, natural sciences, social sciences, and behavioral sciences and be designed to acquaint the learner with the areas of human experience to which he has not yet been exposed.

STANDARD III. The professional education program in occupational areas shall allow for appropriate modification from the requirements described in this document. When a vocational teacher begins to teach without student teaching, it is essential that his program include college supervision on-the-job during his first year of teaching.

The format below is to be used in reporting information.

TITLE OF CATEGORY

I. Title of Sub-Category

A. Title of Content Area (See III,3)

1. Competencies to be included (See III, 3A;

- (a) _____
- (b) _____
- (c) _____

2. Topical Content Outline & Strategies (See III, 3B,C)

- (a) _____
 - (1) _____
 - (2) _____
- (b) _____
 - (1) _____
 - (2) _____

II. Title of Next Content Area**B. Same as above****C. Same as above**

(REPEAT CYCLE AS OFTEN AS NECESSARY)

APPENDIX C

ANNOTATED BIBLIOGRAPHY

1. "An Outline of Procedures for Operating an Employment Orientation Program for Mentally Retarded Students Enrolled in Special Education Classes in Secondary Schools in New Jersey." ED 015 582. Trenton, New Jersey: New Jersey State Department of Education, November, 1962.
Describes the Employment Orientation Program in New Jersey. Characteristics of the program are outlined and suggestions are given to help in the establishment of such a program.
2. Anderson, Del. "A Guide for the Development and Installation of Occupational Training Programs and Services for Disadvantaged and Handicapped Persons." ED 048 481. Charleston, West Virginia: West Virginia State Department of Education, Division of Vocational and Technical Education, May, 1970.
Describes procedures necessary to develop a vocational education program to prepare physically handicapped and culturally disadvantaged for entry level jobs and responsible citizenship. In addition to describing administration and organization, the report discusses special qualifications required for faculty, curriculum, and facilities.
3. Applegate, D. "Job Opportunities for the Educable Retarded." Education, LXXXVIII (April-May, 1968), 368-9.
Lists sixty-one different jobs possible for slow learners or educable mentally retarded students.
4. Birkland, H. and Cochran, W.A. "Why Shouldn't They Learn?" Journal of Industrial Arts Education, XXXVII (March-April, 1968), 20-23.
Offers two approaches to working with intellectually bright and retarded children in industrial arts: 1) "socio-drama" or role playing and 2) individual and small group research.
5. Brandon, George L., ed. "Research Visibility: The Disadvantaged and the Handicapped." American Vocational Journal, XXXXV (April, 1970), 41-56.
Fifteen reviews of conference reports, research and demonstration projects, and surveys pertaining to the need for and applicability of vocational education for the disadvantaged in general, and specifically for disadvantaged youth and adults and the handicapped. Further information is provided in the bibliography on the availability of these and thirty-six other studies.

6. Brandon, George L., ed. "Research Visibility: Manpower Development, Vo-Ed for the Disadvantaged." American Vocational Journal, XXXV (September, 1970), 41-56.
Reviews sixteen research works pertaining to vocational education for the disadvantaged. The reviews are organized under the topics of 1) Manpower Development, 2) Training the Disadvantaged, and 3) Training Disadvantaged Youth.

7. Brennan, Thomas J. "The Slow Learner in Industrial Arts," New Concepts in Industrial Arts. Selected Addresses and Proceedings of the American Industrial Arts Association's 30th Annual Convention at Minneapolis, Minnesota. Washington, D.C.: The American Industrial Arts Association, November, 1968. Brennan discusses points he considers important for anyone planning to enter into working in industrial arts with slow learners. He approaches these points at the elementary, intermediate, and secondary levels of school programs.

8. Brice, G.R. "Vocational Programming for the Retarded." American Vocational Journal, XXXXI (May, 1966), 23-26.
Reports vocational training within and without school available for mentally retarded students seventeen years or older in the Madison Vocational, Technical, and Adult School, Madison, Wisconsin.

9. Brolin, Donn and Thomas, Barbara.
Preparing Teachers of Secondary Level Educable Mentally Retarded. Project Report No. 1. Menomonie, Wisconsin: Stout State University, April, 1972.
Interim report on the Stout State University model for training special class teachers to prepare secondary level educable mentally handicapped students for social and vocational adjustment. Compiled lists of student needs and of teacher competencies are included.

10. Buffer, James J. "Preparing Industrial Arts Teachers for Disadvantaged Children in our Urban Centers." Where The Action Is. Selected Addresses and Proceedings of the American Industrial Arts Association 31st Annual Convention at Las Vegas, Nevada. Washington, D.C.: The American Industrial Arts Association, August, 1969.
Deals primarily with the socially, culturally, and economically deprived. Reviews present teacher education programs and paraprofessional education in this light. Outlines a suggested teacher curriculum.

11. Buffer, James J. and Pfeifer, Edward J. "Found: New Industrial Laboratory Experience for Retarded." Industrial Arts and Vocational Education, LIX (January, 1970), 64-65.
Describes the use of mass-production projects in providing industrial arts experiences for educable mentally retarded students at the junior high school level.

12. Burdin, Joel L. and Reagan, Margaret, editors. "Performance Based Certification of School Personnel." 1970 Miami Beach Training Sessions for National Leaders in Teacher Education. ED 049 152. Washington, D.C.: Association of Teacher Educators, 1971.
The sessions considered techniques for using performance criteria to determine an individual's ability to perform as a teacher in a public school and to qualify for certification. The three parts of the report describe the concept and need for performance-based certification, detail plans for changing certification procedures and consider the impact of performance criteria on teacher certification.

13. Castelli, Albert Louis. "A Study of the Responses of Inner City Teachers of Disadvantaged Children to a Questionnaire on Possible Components of a Teacher Preparation Program for Teachers of Disadvantaged Children." Unpublished Ed. D. dissertation, Wayne State University, 1968.
The study compares two groups of teachers to determine the degree of acceptance or rejection of proposed components of a teacher preparation program for prospective teachers of disadvantaged children. Results of the study indicated eleven conclusions about the components of a teacher preparation program. Many of the conclusions centered around greater pre-service experience out in the field.

14. Centko, Thomas J. "Secondary Curriculum for Teachers of Industrial Education/Special Education." Marquette, Michigan: Northern Michigan University, 1969.
The author presents a four-year curriculum designed to train teachers of industrial education/special education. This undergraduate program was designed for Northern Michigan University and graduates are certified in both areas.

15. Cochran, Leslie H. "Industrial Education and the Disadvantaged." American Vocational Journal, XXXIV (December, 1969), 61-63.
Reviews eleven research studies related to disadvantaged students completed since 1960, concerning special vocational education needs, problems of the disadvantaged, demonstration programs, teachers role, and dropout prevention.

16. Cotrell, Calvin J. and others. Teaching Career Analysis. Prepared for the Fourth Annual National Vocational-Technical Teacher Education Seminar at St. Louis, Missouri, November 1-4, 1970. Columbus, Ohio: Ohio State University, The Center for Vocational and Technical Education, October, 1970. Career analysis of vocational and technical educators resulted in the compilation of the over three hundred competencies categorized and listed in this paper.

17. Curriculum Guide for Aiding Teachers in Establishing Academic Programs for the Mentally Retarded. ED 027661. Raleigh, North Carolina: North Carolina State Department of Mental Health, 1967.
A portion of this guide is devoted to secondary level instruction for these students and industrial arts and prevocational training are among the areas to be taught. The remaining portions of the guide are devoted to primary and intermediate classes.

18. Davies, Don. "Which Statistics Do You Read?" American Vocational Journal, XXXV (November, 1970), 90, 92, 94, 95.
This article predicts a sharp upsurge in vocational teacher demand by 1975 provided the cluster concept is adopted universally and a need for vocational teachers trained to work with special needs students.

19. Dickinson and others. State of New Jersey Senate Bill 2184, Introduced April 1, 1971, Trenton, New Jersey.
This bill proposes the establishment of county special services school districts for the education and treatment of handicapped children, prescribed powers and duties of school boards and county superintendents, and provides for the organization and management of these districts and for the ways and means to finance construction and operation of schools within these proposed districts.

20. "Education of the Handicapped." American Education, III (July-August, 1967), 30-31.
Itemizes federal funding authorized through P.L. 89-750, P.L. 89-258 and Title I ESEA as amended by P.L. 89-313 for fiscal year 1967 by state, handicap and research.

21. Ellis, John; Carman, John J.; and Cayer, David. The Second Half Century: A Plan for Vocational Rehabilitation to 1975 and Beyond. Official Report of the Governor's Advisory Committee, New Jersey Comprehensive Statewide Planning Project for Vocational Rehabilitation Services. Trenton, New Jersey: New Jersey Rehabilitation Commission, 1968.

This report takes a hard look at what is available in vocational rehabilitation programs within New Jersey. It notes the present and expected needs for vocational rehabilitation services and offers eighty-two recommendations for immediate and future action to meet those needs.

22. "Employment Orientation: A Program of Simulated Work and Basic Skills Training." Trenton, New Jersey: New Jersey State Department of Education, Division of Vocational Education, October 1970. This booklet defines the special needs student as either disadvantaged or handicapped or both and describes the objectives and activities of Employment Orientation Programs.

23. Ferguson, Edward T. and Bice, Garry R., editors. Annual National Vocational-Technical Teacher Education Seminar Proceedings, Teaching Disadvantaged Youth (Third, Miami Beach, Florida, October 20-3, 1969). Final Report. ED 037 540. Columbus, Ohio: Ohio State University, The Center for Vocational and Technical Education, June, 1969.
This report includes general session presentations on teacher education and sub-seminar presentations related to teacher education of teachers of the culturally disadvantaged.

24. Gaar, Basil L. "A Prototype for a High School Vocational Special Education Program." Papers and Reports, Volume 2, Number 2. ED 048 682. Tampa, Florida: University of South Florida, Institute III: Exceptional Children and Adults, 1970.
Presents a prototype for a high school vocational special education program for educable mentally handicapped children. Discusses objectives of the program, eligibility for the program, staffing needs, length, curriculum, and departmental and co-operative responsibilities in program administration.

25. Gallagher, James J. "Vocational Education, Special Education, and Vocational Rehabilitation; A Marriage of Professionals Needed for Handicapped Children." Address made at the National Conference on Vocational Education for Handicapped Persons (Pittsburgh, Pennsylvania, February 26, 1969). ED 028 580. Washington, D.C.: Office of Education, Bureau of Education for the Handicapped, February 26, 1969.
Provides a general coverage of problems of vocational education programs. Five projects are identified and described. Discusses also the work of the Bureau of Education for the Handicapped and its divisions of research, training programs, and educational services, major objectives in the field of vocational education and the intent of congress on coordination of efforts.

26. Gallington, Ralph O. "Industrial Arts for the Disadvantaged." American Vocational Journal, XXXXII (November, 1967), 53-4. Presents a proposed industrial arts curriculum to meet the needs of special needs students (Disadvantaged) encompassing seventh through tenth grades.

27. Groves, Ramsey M. A National Survey of Vocational Education Programs for Students with Special Needs. ED 011 041. Columbus, Ohio: Ohio State University, Center for Vocational and Technical Education, May, 1966. Includes a chapter concerning teacher characteristics of vocational educators working with special needs students. This chapter includes tables showing the personal, occupational, and educational qualifications necessary for these teachers.

28. Hay, Archie F. County Boards of Special Services for Children with Special Needs. Wood-Ridge, New Jersey: Bergen County Department of Superintendents, March 1971. Discusses briefly the pluses and minuses of New Jersey education for handicapped and disabled children. Included in the negative side are the recognition of a lack of qualified personnel in special education and a lack of vocational and occupationally oriented programs for these children. In this booklet Hay proposes the creation of County Boards of Special Services and notes the implications for Bergen County in particular.

29. Hensel, James W. and Bice, Garry R. Annual National Vocational-Technical Education Seminar Proceedings (Chicago, October 21-4, 1968). ED 027 424. Columbus, Ohio: Ohio State University, The Center for Vocational and Technical Education, January, 1969. Problem areas of teacher education for differentiated staffing and for teaching the disadvantaged were the topics of intensive study. In addition to major presentations a partial bibliography for teacher education of teachers for the disadvantaged is included.

30. Hewitt, Frank M. "A Hierarchy of Competencies for Teachers of Emotionally Handicapped Children." Exceptional Children, XXXIII (September, 1966), 7-11. Hewitt has selected out the seven categories of "objectivity," "flexibility," "structure," "resourcefulness," "social reinforcement," "curriculum expertise," and "intellectual model" and discusses competencies required for teachers of emotionally handicapped children in light of these categories.

31. Johnson, G. Orville. "Interdisciplinary Workshop for Special Education and Vocational Education Teachers. Final Report." ED 028 304. Columbus, Ohio: Ohio State University, Center for Vocational and Technical Education, February, 1969. Purposes of the workshop were 1) To provide a means for professionally trained educators in special education and vocational education to work as a team in designing local school programs for the educable mentally retarded, 2) To create favorable attitudes toward combined special education and vocational education services for the educable mentally retarded, and 3) To develop guidelines and materials useful in organizing and implementing combined programs.

32. Johnson, Raymond. "The Preparation of Educational Manpower: A Performance Curriculum." Prepared for the Upper Midwest Vocational Teacher Education Conference (Minneapolis, May, 1968). ED 029 094. Minneapolis, Minnesota: Minnesota Research Coordinating Unit in Occupational Education, May, 1968. Presents a short outline on the development of a performance curriculum for teacher education programs.

33. Jones, Ronald E. "About Face in Special Education." Education Canada, XI (December, 1971), 15-18. Discusses the current trend of integrating special education into regular classrooms and the implications this trend has for teacher training.

34. Kagy, Frederick D. "The Needs of Disadvantaged Youth: Implication for Industrial Arts," Where the Action Is. Selected Addresses and Proceedings of the American Industrial Arts Association's 31st Annual Convention at Las Vegas, Nevada. Washington, D.C.: The American Industrial Arts Association, August, 1969. Kagy discusses the sociological difficulties faced by education and relates these problems to technological change. He then proceeds to suggest ways in which industrial arts may be structured for meeting the needs of disadvantaged youth.

35. Kanicki, Walter J. "Woodshop 'S'." Journal of Industrial Arts Education, XXVIII (May-June, 1969), 28-30. Reports the successful use of mass-production projects with educable mentally retarded students and recommends this approach to industrial arts for the education of these students.

36. Kemp, Barbara H. The Youth We Haven't Served. Catalog Number PS 5.280:0038. Washington, D.C.: United States Government Printing Office, 1966.
Discusses vocational education and youth with special needs. Describes the characteristics of disadvantaged youth and makes suggestions about the nature of these students' teachers and the nature of vocational programs for these students.

37. Kemp, Barbara H. "Where Vocational Education Is a Special Need." American Vocational Journal, XXXXII (November, 1967), 24-25, 52.
Defines special needs students and describes programs being set up for them in the vocational education area. Indicates a need for trained personnel and community support for these programs.

38. Kokaska, Charles James. "The Vocational Preparation of the Educable Mentally Retarded." Unpublished Ed. D. dissertation, Boston University School of Education, 1968.
Reviews the history of secondary programs for the educable retarded, indicates their vocational success, and discusses the effect of technological change and automation upon employment in general and of the retarded. A national survey of secondary special class programs is included. Recommendations are for the greater use of cooperative programs and for early introduction of work exploration and experience, student placement according to assessment of employment possibilities, continuous exploration of occupations, and increased school and employment/rehabilitation agency communication.

39. Law, Gordon F. ed. "Research Visibility: Vocational Education Is People -- Youth with Special Needs." American Vocational Journal, XXXXII, (November, 1967), 65-80.
Includes twelve research reviews pertaining to youth with special needs. The research deals with a variety of occupationally oriented programs and with teacher training.

40. Layne, George R. "Industrial Arts in Special Education at the Secondary School Level." New Directions for Industrial Arts. Addresses and Proceedings of the 26th Annual Convention of the American Industrial Arts Association at Washington, D.C. Washington, D.C.: The American Industrial Arts Association, 1964.
Offers a few suggestions to teachers for activities for mentally retarded students.

41. Mackie, Romaine P. and others. Teachers of Children Who are Mentally Retarded. EC 023062. Washington, D.C.: United States Government Printing Office, 1957.
A list of competencies needed by teachers of the mentally retarded is compiled and evaluated and competencies are ranked in order of importance. Additional findings and implications are included.
42. Martin, Edwin W. "A New Outlook for Education of Handicapped Children." American Education, VI (April, 1970), 7-10.
Discusses education of young handicapped children and notes that sixty percent of these children are not receiving appropriate special education services. Urges cross field training of personnel to give appropriate interdisciplinary services.
43. Materials for Secondary School Programs for the Educable Mentally Retarded Adolescent. Revised edition. ED 042 310. Boston, Massachusetts: Boston University, New England Materials Instruction Center, June, 1970.
Compiled materials related to work study programs for the educable mentally handicapped: professional books, textbooks, resource aids, journals and articles, curriculum guides, instructional materials and audiovisual aids. Materials are grouped according to academic areas - one of which is vocational education (industrial arts, home economics, jobs, trades).
44. National Association of State Directors of Teacher Education and Certification assisted by the United States of Education. Standards for State Approval of Teacher Education. 4th ed. Salt Lake City, Utah: The National Association of State Directors of Teacher Education and Certification, 1971.
Proposes standards for state approval of teacher education programs.
45. Nelson, H.D. "Slow Learners; A Challenge for Industrial Arts Education." American Vocational Journal, XXXIX (October, 1964), 30-31.
Defines four categories of slow learners. Indicates how industrial arts may serve as a core of educational programs for mentally retarded students.
46. The New Jersey Comprehensive Plan to Combat Mental Retardation. ED 027 655. Trenton, New Jersey: New Jersey Division of Mental Retardation, June, 1966.
Recommendations to combat mental retardation in New Jersey are made in the areas of coordination; research; prevention, detection, and treatment; clinical, social, recreational and religious services; residential care; education; vocational rehabilitation; and law. Additional information is given on the nature and scope of the problem.

47. Operation Fair Chance: The Establishment of Two Centers to Improve the Preparation of Teachers of Culturally Disadvantaged Students, Emphasizing Occupational Understanding Leading to Technical Vocational Competence. Final Report. Fresno and Hayward, California: California State Colleges at Fresno and Hayward, September, 1969. ED 035 710.
An experimental teacher training program with its roots embedded in the traditional credential programs offered at California State College at Hayward (elementary and secondary levels).

48. Performance Evaluation Project. "The Performance Evaluation Project: A Feasibility Study." New Brunswick, New Jersey, October, 1971. (Mimeographed.)
This pamphlet describes the purpose, objectives, and structure of the Performance Evaluation Project as established by the Office of Teacher Education and Certification of the New Jersey Department of Education. The project is concerned with the possibility of changing teacher certification to performance-based certification. Sixteen task forces are presently determining competencies required in sixteen different teaching areas.

49. Preparing the Handicapped for the World of Work. VT 012 270. Greenville, North Carolina: East Carolina University, 1970. Report of an Institute for Occupational Education Teachers and Related Personnel (Aug. 3-21, 1970). Objective - improvement of professional competencies of occupational educators and related educational personnel from schools with specially funded occupational education projects for handicapped students.

50. Raybourn, J.W. "Industrial Arts for Educable Mentally Retarded Students." Journal of Secondary Education, XXXXV (January, 1970), 24-26.
Described a possible "special" industrial arts program at the secondary level for educable mentally retarded students.

51. Ressler, Ralph. "Make Room for Disadvantaged in Industrial Arts." Industrial Arts and Vocational Education, LX (November, 1971), 24-26.
Provides a general description of the disadvantaged and of methods by which to motivate them in industrial arts laboratory. Identifies those aspects of industrial arts which are conducive to working with the disadvantaged.

52. Ross, Herbert James. "Guidelines for Serving Youth with Special Needs in Vocational Education." Unpublished Ed. D. dissertation, Temple University, 1971.
Ross presents in three categories (1. philosophical guidelines, 2. guidelines for implementation of program, and 3. guidelines for evaluation) guidelines which might prove helpful in organizing services for youth with special needs in vocational education programs.
53. Rules and Regulations Pursuant to Title 18A, Chapter 46 New Jersey Statutes, (June 24, 1970) Title 9, Chapter 28, New Jersey Administrative Code. Trenton, New Jersey: State of New Jersey Department of Education, 1970.
Delineates the rules and regulations pertaining to the identification, classification, and education of all handicapped children between the ages of five and twenty in the State of New Jersey.
54. Schwartz, Louis, "An Integrated Teacher Education Program for Special Education -- A New Approach." Exceptional Children, XXXII (February, 1967), 411-416.
Discusses shortage of personnel and increasing concern over the quality of special education. Describes a proposed special education curriculum which includes an interdepartmental course in special education and industrial education and technology.
55. Scott, Vera Oriss. "An Exploratory Study to Identify the Teaching Behaviors that are Used Most Frequently and are Most Crucial in Teaching Culturally Disadvantaged Children." Unpublished Ph.D. dissertation, Michigan State University, 1967.
In this study Scott identifies which of previously identified teaching behaviors occur most frequently and are judged to be most crucial in teaching culturally disadvantaged students.
56. Seay, Donna M. "A Teacher's Role with the Disadvantaged." VT 005 742. Elmore, Alabama: Draper Correctional Center, No Date.
General article on the teacher's role with economically, mentally, emotionally, and educationally disadvantaged students.
57. Sharkey, F. E. and Porter, C. B. "Industrial Arts for the Mental Retardate." American Vocational Journal, XXXIX (May, 1964), 22-23.
Identifies three distinct groups of retarded children and gives a generalized picture of the mentally retarded child and the characteristics of educational programs for this child. Pre-

sents contributions that industrial arts may make for the attainment of self-realization, human relationships, economic efficiency, and civic responsibility.

58. Sheperd, George. "What Research on the Mentally Retarded Has to Say." Journal of Secondary Education, XLI (December, 1966), 339-342.
Reviews and evaluates major literature which contains implications for the education of educable mentally retarded students in secondary level public schools.
59. Siegel, H. and Haug, E. "Skill Development for the Handicapped." Industrial Arts and Vocational Education, LIX (September, 1970), 24
Describes the set-up of an industrial arts laboratory for the physically handicapped and details equipment.
60. Smith, Robert M. "Preparing Competent Special Education Teachers." Education Canada, IX (December, 1969), 31-36.
Investigates the programs and needs of exceptional children and focuses on the kind of skills their teachers should have. Offers suggestions for preparing and maintaining teachers competent in this field.
61. Smith, R.M. and Tisdall, W.J. "Working with the Retarded Pupil in Industrial Arts and Vocational Education." School Shop, XXIV (April, 1965) 58-59, 114.
Recognizes increased demand for industrial arts and vocational education for handicapped students in general and educable mentally retarded students in particular. Notes communication gap between industrial arts and special education teachers and promotes cooperation between these teachers in planning for these students. Suggests programing ideas for industrial arts and vocational education teachers with mentally retarded students.
62. Smith, William L. "Ending the Isolation of the Handicapped." American Education, VII (November, 1971), 29-33.
Discusses the goals of the Office of Education's E.P.D.A. Special Education Programs and describes some of the programs which are being financed under E.P.D.A. for training in special education.
63. Sparks, Howard L. and Blackman, Leonard S. "What Is Special about Education Revisited: The Mentally Retarded." Exceptional Children, XXXI (January, 1965), 242-247.

- Discusses the increasing practice of segregating educable mentally retarded children from their peers in school and of special preparation for teachers. Calls for research in the area of special education to determine empirically if there are essential differences between special and regular teaching.
64. Sparks, Howard L. and Younie, William J. "Adult Adjustment of the Mentally Retarded: Implications for Teacher Education." Exceptional Children, XXXVI (September, 1969), 13-18.
Briefly reviews adult adjustment of the educable mentally retarded. Presents a tentative model for the preparation of teachers of secondary level educable mentally retarded children.
 65. Tisdall, William J. "Industrial Education and the Mentally Retarded." The Education Digest, XXIX (May, 1964), 42-44.
Suggests that assignment to high school programs composed largely of industrial education and home economics courses does not meet the academic and vocational needs of educable mentally retarded students. A cooperative plan involving programs in special education and industrial education with the special education class as the home base would better meet these needs.
 66. United States Bureau of Labor Standards. "Work Experience and Career Exploration Program." Washington, D.C.: United States Government Printing Office, No Date.
This pamphlet describes the nature of a three-year study of school-supervised work experience and career exploration programs conducted by the education departments of several states and the Bureau of Labor Standards.
 67. VanTassel, Carol, ed. "Guidelines for Professionals Working with Persons with Special Needs: Developed from the Seminar for Supervisors and Teacher Educators of Teachers of Persons with Special Needs." (University of Kentucky, June 12-23, 1967). Lexington, Kentucky: Kentucky Research Coordinating Unit, June, 1967.
General guidelines for teacher education programs and for programs for persons with special needs. Suggestions are provided for the construction of a course of study to develop characteristics deemed necessary for teachers of special needs students.

68. VIEW of the Handicapped (Pilot Program) Teachers Guide and Index. ED 050 261. Indianapolis, Indiana: Indiana State Department of Public Instruction, Vocational Education Division, March, 1971.
The guide and index is for teachers' use in providing a program of pre-vocational orientation, cross-occupational skill training, and job-specific information to educable mentally handicapped students in junior and senior high school special education programs.
69. Viggiani, J.C. "Industrial Arts for Exceptional Children." School Shop, XXIV (March, 1965), 21,42.
Suggests five possible industrial arts areas for retarded children and briefly describes experiences which could be used in these five areas (wood, metal, home mechanics, auto mechanics, and general shop.) Notes the existence of work-training programs and sheltered workshops for training these students vocationally and states the need for qualified personnel in these programs.
70. "Vocational Education and Work Study Programs." Exceptional Children Bibliography Series ED 036 025. Arlington, Virginia: Council for Exceptional Children, Information Center on Exceptional Children, September, 1969.
Contains a bibliography of fifty-five abstracts and descriptive terms of documents concerned with all aspects of vocational education, work study programs, and rehabilitation techniques for use with virtually all handicapping situations.
71. Vocational Education for Persons with Special Needs. ED 011 929. Sacramento, California: California State Department of Education, 1966.
A survey of research to identify the vocational needs of individuals with special problems. Completed studies, research-in-progress, and current proposals were included in this review.
72. Wallin, J. E. Wallace. "Training the Mentally Handicapped: Reflections from a Half-Century of Experience." Journal of Education, CLI (October, 1968), 93-97.
Provides nine recommendations for training the mentally handicapped for life adjustment.
73. Wentz, Charles Hunter. "A Study of Industrial Arts Activities for Educable Mentally Retarded Junior High School Youth with Implications for Guidelines in Special Industrial Arts Activities." Unpublished Ed. D. dissertation, Texas A & M University, 1969.

Purpose of the research was to compare present practices of industrial arts teachers in programs for educable mentally retarded youth with those of special education teachers who teach some phase of industrial arts. Experience and training of the teachers were compared. A determination of tools and equipment used was made. A guide in industrial arts activities was developed for teachers in these programs.

74. Wylie, John R. "Sequence of Vocational and Occupational Training Programs for Handicapped Students," Trenton, New Jersey; State of New Jersey Department of Education, Division of Vocational Education. (Mimeographed.)
This pamphlet outlines and describes the types and sequences of vocational and occupational training programs available to handicapped students in regular and vocational schools.
75. Wilson, Herman Cecil. "Industrial Arts for the Special Education Student," Man-Society-Technology. Representative Addresses and Proceedings of the American Industrial Arts Association's 32nd Annual Convention at Louisville, Kentucky. Washington, D.C.: The American Industrial Arts Association, August, 1970.
Lists briefly guidelines for planning successfully for the EMR student in industrial arts.
76. Young, Earl B., ed. Vocational Education for Handicapped Persons; Handbook for Program Implementation. ED 032 695. Pittsburgh, Pennsylvania: Pittsburgh University, August, 1969. Information is provided on types of handicaps, cooperative and interagency involvement, services available from vocational rehabilitation, programs and services. Personnel preparation, utilization, and interactions are discussed.
77. Younie, William J. "Increasing Cooperation between School Programs for the Retarded and Vocational Rehabilitation Service: An Experimental Teaching Approach." Mental Retardation, IV (June, 1966), 9-14.
Describes an experimental teaching project designed to help teachers insure a smooth transition from school to work for the retarded. Includes materials and types of approaches used which will help pre-service and inservice teachers improve the rehabilitation readiness of their pupils.